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Railway Age

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Deluxe Passenger Service

WITH

9 MORE EMC DIESELS

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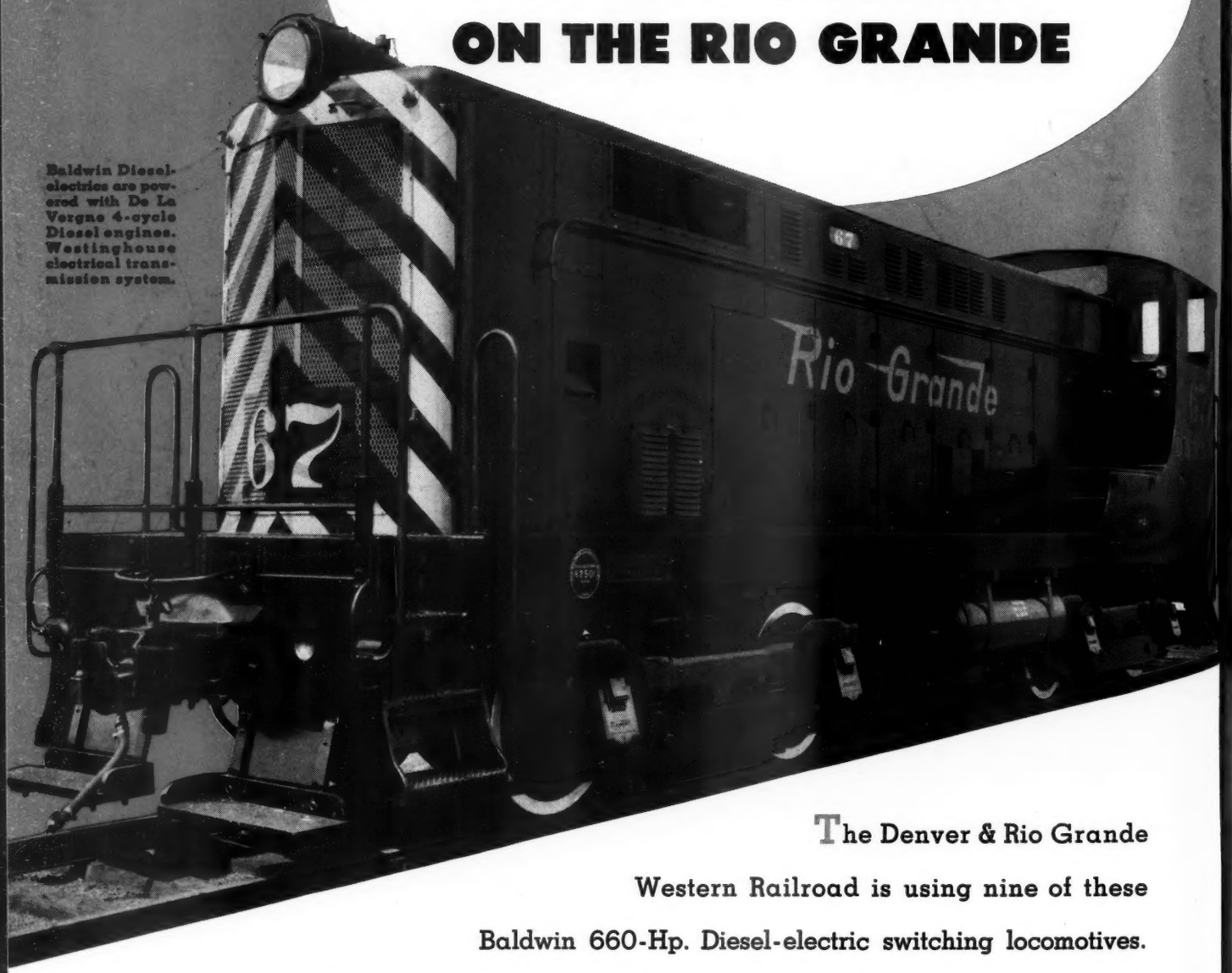
9 BALDWIN *Diesel-Electrics* ON THE RIO GRANDE



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Baldwin Diesel-electrics are designed and built to meet the exacting requirements of railroad service. They embody the experience of America's oldest locomotive builder.

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THE BALDWIN GROUP

THE BALDWIN LOCOMOTIVE WORKS

Philadelphia

Railway Age

With which are incorporated the Railway Review, the Railroad Gazette and the Railway Age-Gazette. Name registered U. S. Patent Office.

Vol. 111 October 25, 1941 No. 17

Published every Saturday by the Simmons-Boardman Publishing Corporation, 1309 Noble Street, Philadelphia, Pa., with editorial and executive offices: 30 Church Street, New York, N. Y., and 105 West Adams Street, Chicago, Ill.

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The Railway Age is a member of the Associated Business Papers (A. B. P.) and of the Audit Bureau of Circulations (A. B. C.)

Subscriptions, including 52 regular weekly issues, and special daily editions published from time to time in New York, or in places other than New York, payable in advance and postage free. United States, U. S. possessions and Canada: 1 year, $6.00; 2 years, $10.00; foreign countries, not including daily editions: 1 year, $8.00; 2 years, $14.00.

Single copies, 25 cents each.

H. E. McCandless, Circulation Manager, 30 Church St., New York, N. Y.

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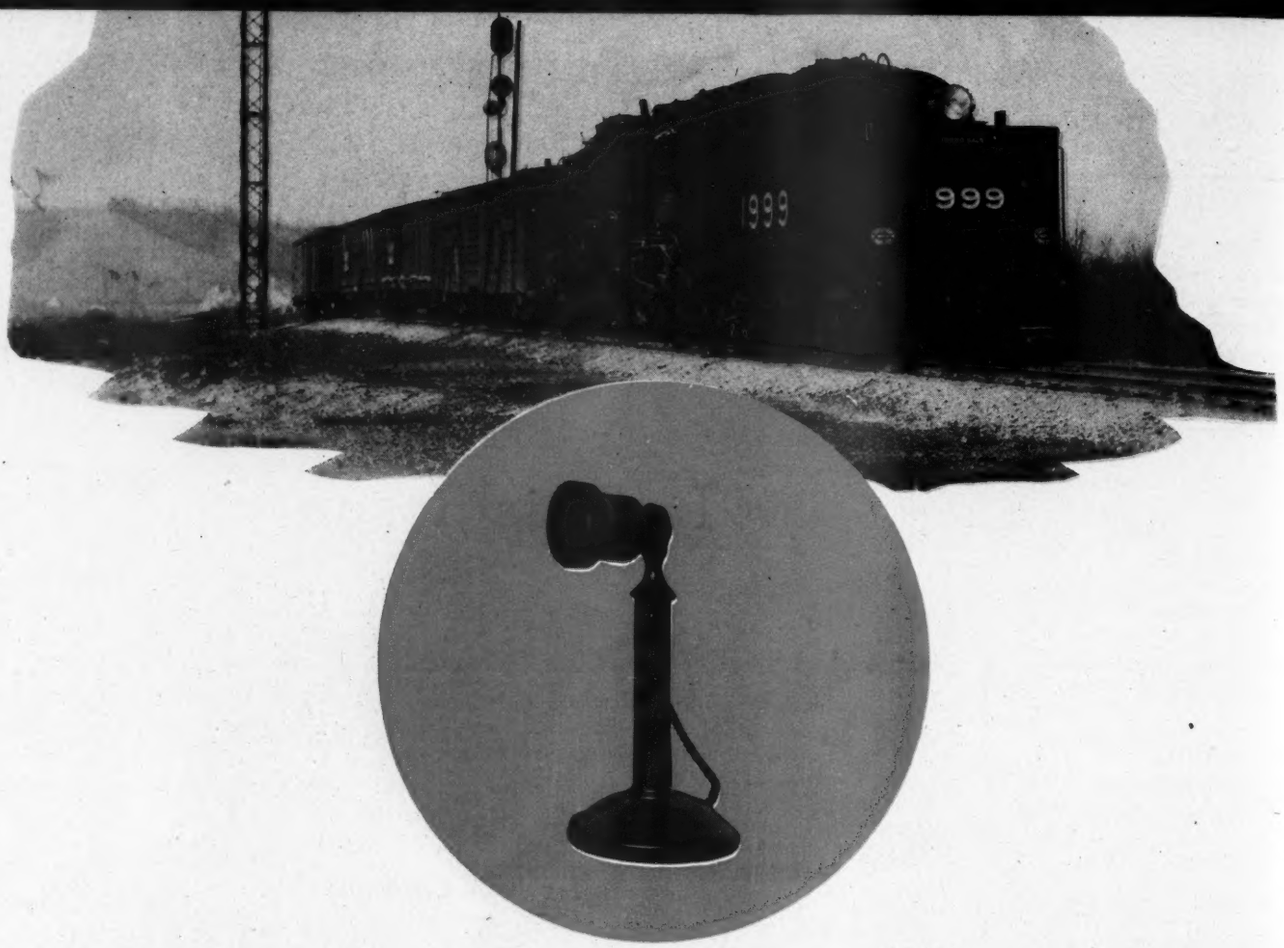
The Railway Age is indexed by the Industrial Arts Index and also by the Engineering Index Service

PRINTED IN U. S. A.



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RAILWAY AGE

Great Significance of Recent Railway Traffic Statistics

The most recent statistics of railway traffic available reflect the unprecedented and confusing effects being produced on business in general and railway business in particular by the way the defense program is being handled. On the basis of incomplete data the *Railway Age* recently published an estimate that when complete data for the first eight months of 1941 were available they would show that the freight service rendered by the railways in the first two-thirds of 1941 was greater than in the first two-thirds of any previous year in history. We were too conservative. Statistics just issued by the Interstate Commerce Commission show that ton-miles (tons carried one mile) in July were so much greater than ever before in that month that the amount of railway freight service rendered in the **first seven months** of 1941 was greater than in the first seven months of any preceding year. The previous seven months' record was 253 billion 368 million in 1929, which compares with 253 billion 583 million in 1941—only a small gain, but nevertheless a gain.

Non-Seasonal Trend of Carloadings

Another more recent significant development has been the failure of carloadings to make a normal seasonal increase in October. We have repeatedly predicted that this would occur; but nobody anticipated that the failure would be so marked as it has been. The increase in loadings over 1940 accelerated from 7 per cent in January to 24 per cent in May; was about 20 per cent in June, July and August; was less than 13 per cent in September; and was only 11 per cent in the week ended October 11. While loadings normally rise to their highest level in the second week in October, they declined this year from 919,510 in the week ended September 27 to 917,516 in the week ended October 4 and to 903,877 in the week ended October 11. The *Railway Age* has found that the best measure of the trend of loadings is average weekly loadings in the five years 1925-1929, inclusive; and this measure indicates the same tendency. They increased from 76 per cent of the 1925-1929 average in January to 85.5 per cent in June; then declined in July to 85 per cent; in August to 82; in September to 79.6; and in the week ended October 11 to 78 per cent. Was the peak of 1941 carloadings passed almost a month before the annual peak normally is attained? Perhaps not; this period is full of abnormalities and surprises. But it now appears certain that the 1941 peak will prove much lower than some government "authorities" predicted, and that, to their discomfiture, there will not only be no large shortage of cars in October, but, as the *Railway Age* confidently forecasted in an editorial in the issue of September 20, a comfortable surplus throughout the fall.

The success of the railways in rendering thus far in 1941 the greatest freight service in history, and also the marked failure of traffic to rise to a normal seasonal fall peak, merit comment.

Largest Freight Service in History with Reduced Equipment

Freight loadings in the first seven months of the year were 20 per cent smaller than they averaged in 1925-1929, inclusive, and 22 per cent smaller than in 1929; and yet ton-mileage was 3.5 per cent larger than it averaged the first seven months of 1925-1929, and a trifle larger than in 1929. The explanation is not afforded by the number of tons of freight loaded, which was more than 1⅓ billion in 1929 and less than 1¼ billion in 1940. It is afforded by the increase in the average distance each ton was hauled, which was 187 in the first seven months of 1929 and 206 in 1941.

The widely-known decline during the depression in the amount of equipment was what principally caused uneasiness among the friends of the railways and hope among the enemies of private management, concerning their ability to handle a record-breaking traffic. Therefore, the facts about the number of railroad-owned freight cars that were available, and the number actually used, in the first seven months of 1929, and the number that were available and the number actually used in rendering a slightly larger freight service in the first seven months of 1941, are both interesting and significant. The average number of railroad-owned cars during the first seven months of 1929 was 2,213,918, and in 1941 was 1,619,659—a decline of 594,000, or 27 per cent. The average number in bad order in 1929 was about 141,000, or 6.4 per cent of the total number, and the average surplus about 253,000—leav-

ing an average of about 1,820,000 that were "active." The average number in bad order in 1941 was about 98,044, or 6.1 per cent of the total number, and the average surplus, 98,335—leaving an average of 1,423,000 that were "active." Thus the record-breaking freight service of the first seven months of 1941 was rendered with about 400,000 fewer "active" railroad-owned cars than the slightly smaller service of 1929. The increase in efficiency of the operating methods, locomotives and other facilities employed in the utilization of cars is obvious.

Freight Service Larger—Earnings Smaller

In this connection it should be noted that the increase over 1940 in carloadings in the first seven months of this year was 18 per cent; in **tons** loaded was 23 per cent; and in **tons carried one mile** was 24.3 per cent. These increases not only resulted in the railways rendering more freight service than ever before, but reflect what was apparently the largest increase in traffic demands that ever occurred within the same length of time. The ability of the railways successfully to cope with them was principally due to the improvement and expansion of their facilities by the increase of 5½ billion dollars in their total investment made in the decade ending with 1930.

The facts about the earnings derived by the railways from rendering this record-breaking freight service are very pertinent. Their freight revenues in the first seven months of 1929 were 2 billion 732 million dollars, and in the first seven months of 1941, for rendering a slightly larger service, were only 2 billion 408 million dollars, a decline of 12 per cent due entirely to a decline from 1.078 cents to .950—also 12 per cent—in their average revenue per ton per mile. Thus the shippers of the country got slightly more freight service than in 1929 for 324 million dollars less. Gross earnings from all sources in the seven months were 716 million dollars less than in 1929; operating expenses 651 million dollars less; taxes 72 million more; rentals were larger; the net result being about 146 million less net operating income.

Why the Downward Trend of Carloadings?

A very important question is why since June carloadings have failed to make seasonal increases, and turned sharply downward in October when they are usually rising to their seasonal peak. One of the reasons, of course, is that the normal seasonal rise of traffic to a peak in October is due to commercial causes, and that the railways are now handling a large amount of defense traffic which does not naturally rise to a peak at any time of the year, but may be reasonably expected to increase throughout the year as long as expenditures and production for defense continue to increase. But the recent downward trend of carloadings requires additional explanation. One reason apparently is that the large increase in traffic during the spring and summer months was partly due to the fact that great quantities of the things then being produced and shipped were being piled up in inventories, and that recently there has been occurring a decline in the accumulation of inventories.

Obviously, after inventories have been accumulated to some uncertain level by industry and government agencies, there must begin a reduction or cessation of their accumulation, after which production and actual use and consumption of raw materials, fuel and semi-finished or finished products will begin to equal each other. If there have not been huge accumulations of inventories somewhere, what, for example, has been becoming of all the steel produced? There has been more steel produced thus far this year than ever before; and yet, as has been shown in these columns (*Railway Age,* October 11, page 580) equipment building companies and the railways have been unable for months to get enough of it to carry out their large and vitally needed program of building new cars and locomotives, and of adequately maintaining the equipment they now have in service and their other facilities. Where has all the steel being produced been going? That the railways shall be able to prepare themselves to continue meeting all traffic demands is as essential as anything else whatever to the successful conduct of the defense program; and when they can't get the relatively small amount of the total steel produced necessary to meet their requirements there is plainly something very wrong with the way in which it is being allocated.

Curtailed Production by Small Business

There is apparently still another important reason for carloadings not only failing so completely to make a seasonal increase, but actually declining when normally they are still increasing. This is the disruption of small business and reduction of its production throughout the country by the way in which the defense program is being carried out. Perhaps this is necessary; but it is most deplorable. And those who for more than eight years have been studying, condemning and correctly forecasting the economic effects of New Deal policies are naturally prone seriously to question its wisdom and necessity. Very much the same men are responsible for the New Deal's defense policies as were responsible for its "recovery" policies from 1933 to 1940—which so effectively prevented recovery. Their "recovery" policies prevented recovery because intended much more to establish a new order by destroying private enterprise, or at least completely subordinating it to a government-planned economy, than to cause recovery.

The most important condition in the United States today may be the division of opinion regarding whether we should enter the war, but of no less significance, and perhaps of no less importance is the reason for this division of opinion. It is true that the slogan "He

kept us out of war," helped re-elect President Wilson in 1916. But he had the almost unanimous backing of the people in asking Congress for the declaration of war that it adopted only a few months later, while everybody knows that, because of the existing division of public opinion, it would be impossible to get Congress to adopt a declaration of war now. And yet our people are more nearly unanimous in their hostility toward Germany now than they were when Congress declared war in 1917. Why, then, the much greater division of opinion regarding whether we should enter the war?

Administration's Domestic Purposes Cause Disunity

It is due solely to widespread lack of confidence in the **domestic purposes** of the New Deal administration. Nobody believed the Wilson administration had been using, and would continue using, every kind of power given it, for defense or other purposes, and whether in peace or war, to promote a revolution in our form of government and our economic system. Therefore, whether we should enter the war could be, and was, considered twenty-five years ago solely as a question of **foreign** policy. But now a very large part of the American people know that every increase in power yet given the New Deal administration has been used to promote a revolution at home and, therefore, have either **hoped or feared** that the powers given it for purposes of defense, and that would be given it if we entered the war, would be used further to promote the revolution at home as well as to carry on the war abroad. Most of those who have **hoped** that this would be done, and, still more, those who have feared it would be done, have been unable, and are still unable to consider the administration's foreign policy separately from its **domestic** policies. Hence, disunity regarding its **domestic** policies is causing an appalling disunity regarding its **foreign** policy such as has never existed regarding the foreign policy of any American administration since the war of 1812.

The situation has a very recent precedent. The French were similarly divided regarding domestic economic policies, and in consequence regarding foreign policies, before and when they entered the present war. They had very recently had a "Popular Front" government of avowed communists, socialists and radicals which had been adopting socialistic policies to promote a revolution which its promoters claimed would benefit the working class but which it was plain would ruin the middle class. The middle class and its leaders were opposed to these domestic policies, and hence regarded their own communists and socialists with little or less hatred and fear than they felt for Hitler and the Nazis. The parallel to the situation now existing in the United States and the reasons for it are only too plain.

The forebodings of those who condemned the administration's previous policies are not diminished by continuance during the defense effort of policies obviously tending to (1) increase the power of labor unions regardless of the effects on all business and production,

Taxation

Taxes may be considered as the prices we pay for government and governmental services. Taxes, however, differ from the prices we pay for other services or commodities. We have a greater degree of selectivity in the purchase of our average, everyday commodities—we can buy or not buy, as we see fit. As individuals we may or may not want certain governmental services; we may or may not receive the direct benefits of such services. Yet we are compelled to pay for them through taxes.

Under the democratic process to which we Americans strongly adhere, we have the services if a majority of persons so express themselves. Sometimes, the legislative interpretation of the majority's wishes may be imperfect—yet we must accept the services and pay the price in taxes.

Difficulties may arise when we fail to relate the price in taxes with our express or implied demands for governmental services. Separation of the price from the product—whether with general commodities or with governmental services—is equally bad. If we could conveniently put price tags on governmental services, if we could only bring the realization of the cost home to the individual, we might then approach the soundest government, in which fiscal policy would be synonymous with the wise spending of the public's tax money. It is with this relationship in mind that one may approach the tax problem.

At the beginning of the World War in 1914 Federal, state and local governments were collecting slightly more than $2 billion a year in taxes. In 1940 we contributed $14½ billion in taxes toward the cost of government and even then only partly offset total expenditures. The ratio of taxes to national income was 20% as compared with only 6% in 1913. . . .

Although taxes have mounted to a record high level, they are not high enough to match the spending of funds by Federal, state and local governments. In the past year, 1940, for example, expenditures exceeded receipts by more than $4 billion.

Since 1913 aggregate government expenditures have multiplied nearly seven times—from slightly under $3 billion to almost $20 billion in 1940.

This high level of spending can be attributed largely to the expanding domain of government. In the past, government's duties consisted of such primary functions as national defense, education, the erection of certain essential public works not in competition with private enterprise, and police, fire, health and allied protections. But now government has assumed new or expanded old functions. For example, the assumption of social services and welfare responsibilities has greatly increased the costs of government.

The ultimate effects of such vast governmental spending are problematical. An evaluation of these effects, however, is all important. It is certain that any nation, if it is to survive, cannot ignore the effects of such spending on the productive mechanism.

From "Tax Facts & Figures," Published by the Tax Foundation, N. Y.

(2) socialize the entire economy, and (3) cripple or ruin small business.

Carloadings Trend a Bad Omen

The recent downward trend of carloadings has helped the railways completely avoid the shortages predicted by persons in Washington who hoped they would "break down" and furnish a pretext for government operation. Perhaps, now that loadings have failed to make a seasonal increase, they will fail to make during the months immediately ahead a seasonal decline. Meantime, every possible effort should be put forth to render it certain that the railways and manufacturers for them will get the materials required to keep the railways in condition to meet all demands. But the recent trend of carloadings is not a good omen. It indicates that the New Dealers' defense policies, like their previous recovery policies, are causing unfavorable changes in our economic system tending to prevent it from so functioning as to enable it both to bear the huge defense load and to produce and distribute for civilian purposes all the goods that it could reasonably be expected to produce and distribute if, by less government interference, and incompetence, it were given a chance.

"Transportation Atavism"

In a recent message* to younger railroad men, Vice-President Charles S. Belsterling of the United States Steel Corporation said: "No greater service to the transportation companies in this country may be rendered by the younger commercial officers of the railroads than to thwart all unwarranted attempts by theorists to localize industries, which would destroy trade and commerce between the states upon which the rail carriers are dependent for their growth and expansion."

This admonition deserves a wider audience than just the younger railroad commercial officers, or even just the railroads. Rather it ought to be laid before all branches of society that have to do with production, which, of course, includes labor. One of the forces making for the decentralization of industry has been the social unrest that has seemed to be more prevalent in congested commercial areas than elsewhere. It is worth considering how much of this unrest may be due to relatively higher living costs in these areas; and whether or not the theory of freight rate construction which measures the price to so large a degree by the distance moved may have contributed to this condition.

Also, has the fact that transportation costs of many commodities are higher than they were in relation to the unit costs of the commodities themselves—been an incentive toward changing uneconomically the commercial geography of the country?

Railroad investment is of such permanent character that radical changes in the flow of traffic cannot help injuring the railroads. Where such changes are in the interest of greater economy, they come under the general heading of progress and cannot well be resisted. But where they are the result—not of underlying economy, but only of arbitrary action—these changes are wholly destructive; because they injure the railroads without compensatory benefits to anybody.

Nor is it railroad owners and managers alone who have a direct and immediate interest in finding an intelligent and constructive answer to this problem. Railway labor has as great, or even greater, stake in the outcome. Because railroad labor's "rights" are established on seniority. As far as specific railroad employees are concerned —when a line goes into decay because of shifts in the flow of traffic—there is small consolation to them in the fact that the jobs they lose may be won by other transportation employees (most likely truck drivers and bargemen); or by employees in industry who provide substitutes for transportation.

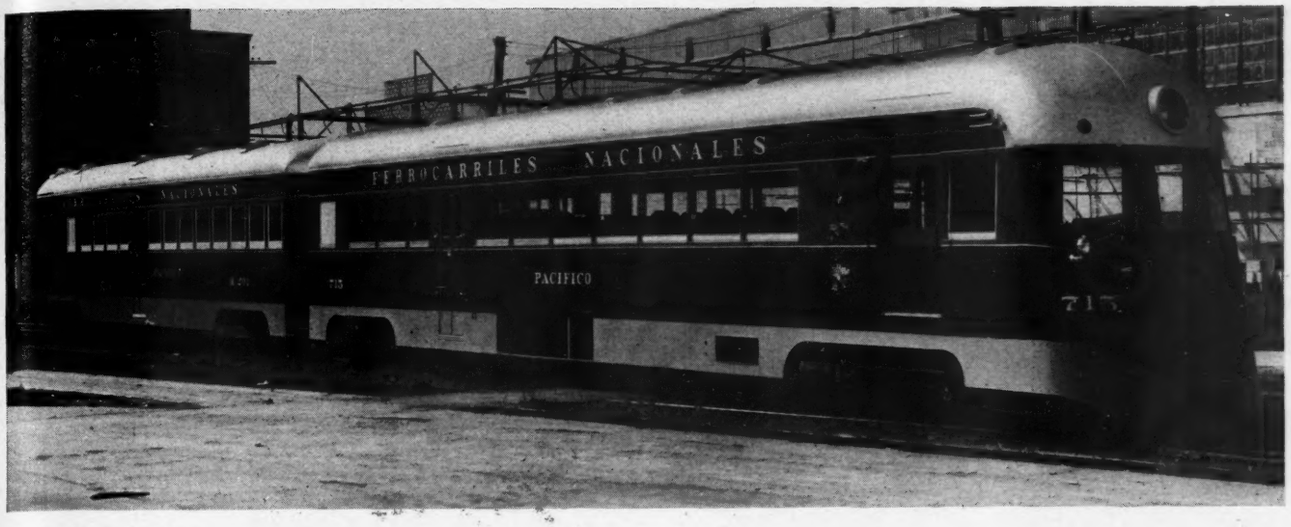
The old idea that the measure of the freight rate doesn't matter so long as all competitors (i. e., shippers) are on an equal footing does not hold true in a time when it is so easy for producers to provide their own transportation; and when so many alternatives to reduce the demand for transportation are available. The contention that no great care need be taken to avoid exacting more for a given service than it is reasonably worth, using the resulting surplusage to move other traffic for less than a reasonable price—thereby aiming at the development of an "optimum" of revenue and transportation units—needs constant checking with actual facts; in order that the theory may not persist beyond its useful life, as theories sometimes do.

Besides the discouragement to decentralization that could come from greater attention to reducing the costs of transportation and improving its quality—the promotion of decentralization and of regional self-sufficiency by inexperienced and impractical government officials and employees should be challenged. They should be called upon to prove by detailed facts and not merely by plausible polemics the economic desirability of their theories, or to cease preaching and practicing them.

It is not only proper, but highly necessary, that the carriers should be deeply concerned in the prompt and efficient movement of defense traffic. But for the continued well-being—not only of railroad owners and railroad employees but the nation as a whole—it is of equal importance that the railroads' transportation capacity continue to be utilized to a reasonable degree when peace comes.

A realistic examination of conditions in competitive transportation, in industrial decentralization and in shifts in the flow of traffic—and policies which will counteract unfavorable tendencies thereby disclosed—appears to be a necessity if the future of the carriers is to be reasonably safeguarded.

* Proceedings of New York Railroad Club, April 17, 1941.



Motor and Trailer Cars for Colombian Railways

Motor cars designed for narrow-gage, heavy-grade operation are powered by oil engine with hydraulic transmission

TWENTY-TWO deluxe Motorailers and thirteen trailers have just been completed by the American Car and Foundry Company at Berwick, Pa., for the Colombia National Railways in South America. Some of these cars will run on the F. C. Del Pacifico out of Buenaventura, others on branch roads out of Bogota, Colombia. They will run both as single self-propelled motor cars, or in a train of 2 cars; that is, one power car and one trailer coupled together.

All of the cars were styled and decorated in a similar color scheme on the exterior. On the interiors, however, due to the fact that some of the cars will operate in the low lands or warm climate, the cool colors, such as blues and greens were used throughout, while on those which will operate in the mountains and cooler climate, the warmer shades, such as reds and tans were used.

The motor cars are of two types—14 deluxe cars, which are a bit more spacious and seat 40 passengers and 8 standard cars which seat 44 passengers. The floor plans are practically the same; that is, a baggage, mail and operator's compartment at the front, then a passenger compartment with a wide center entrance. At the rear of the car is a large toilet on one side and a small bar on the other.

Sixteen of the motor cars and eight trailers have 3-ft. track gage and six motor cars and five trailers have meter gage.

The deluxe motor car floors have Keystone and cork covered with $\frac{3}{16}$ inch linoleum, while the standard cars have 1 inch plywood covered with $\frac{3}{16}$ inch linoleum. The trailer car floors are tongue and groove maple, painted.

It was necessary, due to the steep grades and high altitudes which will be encountered on the different branches of the Colombia National, that these rail cars be built just as light as possible. This was accomplished by the use of low-alloy high-tensile steel, such as USS-Cor-Ten in the framing and structural members and Armco HT-50 in the side sheets and roof sheets.

The Car Structure

The underframe is built up of rolled and pressed sections. A light weight side sill is made up of two rolled angles which are intermittently welded together to form a Z-section and run the full length of the car, except for the center entrance where it is cut away and is reinforced with a 3-in. rolled channel which drops down beneath the bottom step and is securely welded to the side sill Z-section in the manner of a truss.

Floor and equipment supports span across the car from side sill to side sill, a center sill being unnecessary, since the buffing loads are carried back to the bolster and thence to the side girders. A center-sill strut, however, is carried from the bolster out to the end of car and a torque-arm sill from the bolster back to the first cross bearer.

A combination of rolled Z-shapes, spanning from sill to sill and insulated from the car floor are welded in to facilitate a three-point suspension of the pancake Waukesha-Hesselman engine, which is mounted beneath the floor.

The sides are of girder construction consisting of a welded frame and, spot welded sheathing. The framing consists of a light rolled angle side sill and side plate both of which are securely welded to pressed Z-shaped posts. Further transverse stiffeners are added just below and above the windows by pressed zee shaped members running the full length of car, except at the

doors, and welded into each post to make them act as continuous stiffeners.

The roof is also a stiff self-contained sub-assembly which consists of a welded framing composed of Z-shaped pressed carlines, rolled angle roof side plate and pressed Z-shaped purlines welded in at each carline to make them function as continuous full length members. The roof sheets are then riveted in place to complete the sub-assembly.

The car shell is finally completed by driving horizontal rivets at the side sills and side plates to join the two side frame girders with the underframe and the roof assemblies. The ends are then built up on the shell, some smaller sub-assemblies also being used at this point. Substantial end posts run from the center sills at the bottom to the anti-telescoping sheet at the top.

As these power cars are built to operate normally in one direction only, the front ends are streamlined and made to accommodate three windows which give the operator excellent vision around the entire front and sides of the car. The rear end of the power car and both ends of the trailer are built up like the conventional blind end cars and they have a Janney type coupler with a 9-in. slotted knuckle face for use with a link and pin. These ends are also provided with an A.A.R. Class G spring draft gear.

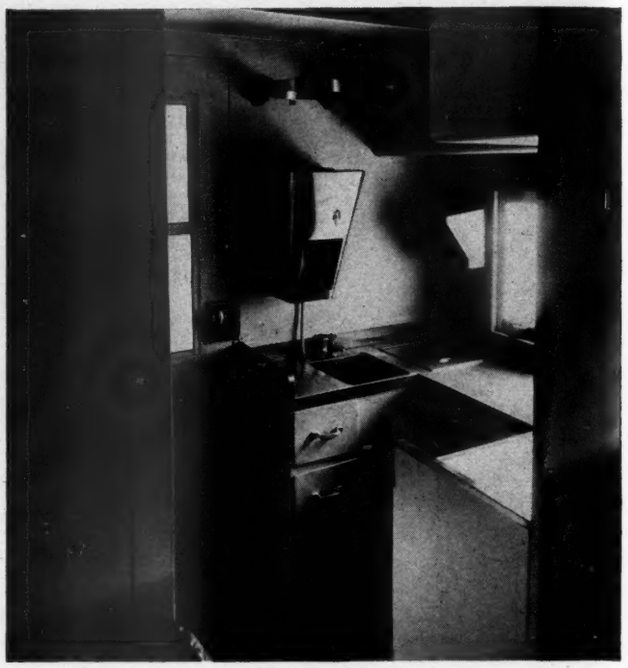
Provision is made at the sloping, rounded front end for the insertion of an emergency coupler if and when needed.

The cars are insulated with 1-in. material in the roof and sides on both standard and de luxe motor cars. The floors have 1-in. insulation.

Extruded aluminum lift sash are installed on all of the power cars, while a lift wood sash is used on the trailers. All sash are glazed with shatterproof glass.

The seats were built by the J. G. Brill Company and have the individual reclining feature and arm rests in the de luxe cars, while the standard cars do not have the reclining feature. The trailer cars have the conventional railway car seat.

The lights used are a louvre style deflector type applied on the center line of the ceiling and a de luxe ornamental bus-type bracket light with individual switch control located in the fascia panel above each seat. The side bracket lights are omitted from the trailers.



The Motor Cars Have a Compact Bar for Service of Refreshments to Seated Passengers

As these cars will operate in a temperate climate, heating and air-conditioning are considered unnecessary.

Power Plant and Transmissions

The six-cylinder engine burns Diesel oil, but is not a Diesel engine. It is built for the American Car and Foundry Company by the Waukesha Motor Company, Waukesha, Wisc., under license of the Hesselman Motor Company, Stockholm, Sweden. It is a solid injection, low pressure, electric ignition oil engine.

The engine is super-charged by a positive blower

Interior of One of the De Luxe Motor Cars Looking Toward the Operating Compartment

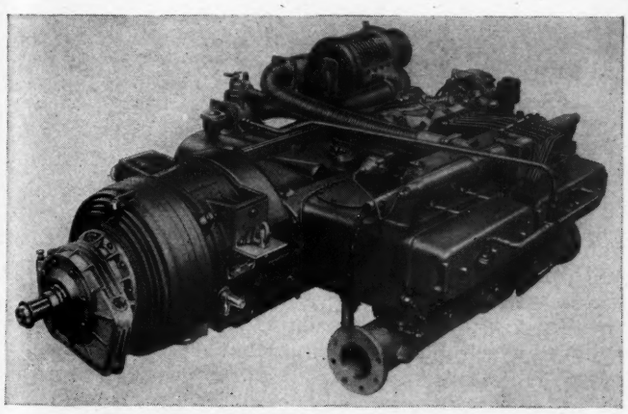
manufactured by the Maculloch Engineering Company, Milwaukee, Wisc. The blower consists of two three-lobed rotors, and is V-belt driven from an extension of the crankshaft at the gear-case end of engine.

The engine develops 275 hp. at 1,800 r.p.m. and has a bore of 6¼ inch and a stroke of 6½ inch, giving a total displacement of 1,197 cu. in. Safety devices shut the engine down by cutting off the fuel in case of excessive temperature, low oil pressure, over-speed, or running backwards. It is started by a conventional heavy-duty starting motor using a Dyer drive, since the low compression makes them easy to crank.

The transmission is a hydraulic torque converter which includes a direct-drive feature. It is manufactured by the Twin Disc Clutch Company at Racine, Wis. An electrically controlled, double air cylinder effects shifting of the converter clutch.

Engine speed is controlled by an air cylinder mounted on the engine and working directly against the throttle lever. Air is metered to the cylinder by a self-lapping valve at the operator's position. Since the car speed is proportional to valve-handle travel, an infinite adjustment of speed is possible. The shift from hydraulic to direct drive is made by throwing a switch mounted adjacent to the throttle valve.

Forward and reverse operations are accomplished by shifting a sliding jaw clutch on the drive axle. The axle is equipped with two spiral bevel gears which float on ball bearings and are both constantly in mesh with the drive pinion, which is between them. The clutch is splined on the axle and will engage with matching teeth



The Waukesha Hesselman Oil Engine and Twin Disc Clutch

on either bevel gear. Since the two gears at all times turn in opposite direction, shifting of the clutch from one gear to the other, thus locking the selected gear to the axle, will change the direction of car motion. Shifting is performed by air cylinders controlled electrically from a switch at the operator's position.

All of the power equipment is under the floor. The torque converter is bolted directly to the engine flywheel housing and flywheel. Power is transmitted from the converter by means of a flexible drive shaft to the leading axle.

V-belt-driven auxiliaries include the supercharger, a 12-volt generator, two three-cylinder automotive type air compressors, and two radiator cooling fans.

Trucks and Brake Equipment

The 5-ft. 6-in. wheel base and the 6-ft. wheel base drive trucks are the four-wheel type with cast-steel frames and bolsters. The axles are mounted with Timken roller bearings. The side frames, supported on journal boxes through coil springs, carry the bolster on full elliptic springs.

The drive wheels are 30 in. diameter; all trailer wheels, 26 in. diameter, and the brake shoes are outside hung.

The air brake system is Westinghouse semi-automatic modified S.M.E. straight air type. One cylinder at the front end was body mounted, while two smaller diameter cylinders were mounted on the rear truck, this of course was necessary on account of the drive axle assembly on these narrow gage trucks, requiring the available space.

The drive trucks weigh 7,300 lb. and the trailer trucks weigh 6,140 lb.

Principal Weights and Dimensions of the Colombian Motor Cars and Trailers

	Motor Cars	Trailers
Lightweight of car, lb.	48,316	30,565
Service weight of car, lb.	52,540	31,354
Loaded weight of car, lb.	62,830	41,054
Length overall, ft.-in.	57-1 13/16	47-3 5/16
Width over side sheets, ft.-in.	8-6 1/16	8-6 1/16
Height, rail to top of carline, ft.-in.	11-8 3/4	11-8 3/4
Height, rail to top of floor, ft.-in.	3-5 3/16	3-5 3/16
Height, floor to ceiling at center line, ft.-in.	8-1 1/4	8-1 1/4

Arnold Lists Transport Practices He Dislikes

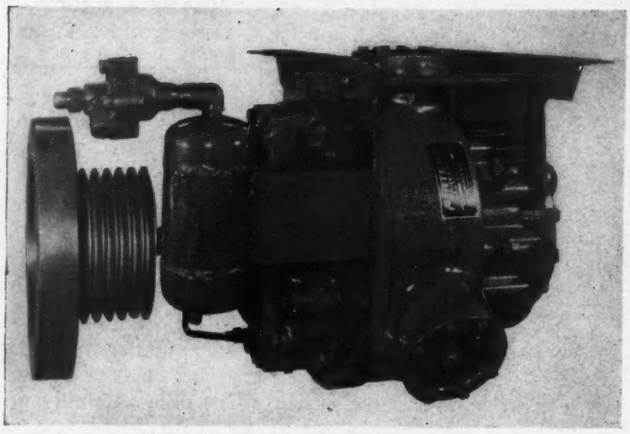
THURMAN ARNOLD, Assistant Attorney General of the United States, in a speech at Kansas City on October 16 listed many alleged monopolistic practices in transportation—which he is either prosecuting, intends to prosecute or seeks legislation to enable him to prosecute. Among other things, he said:

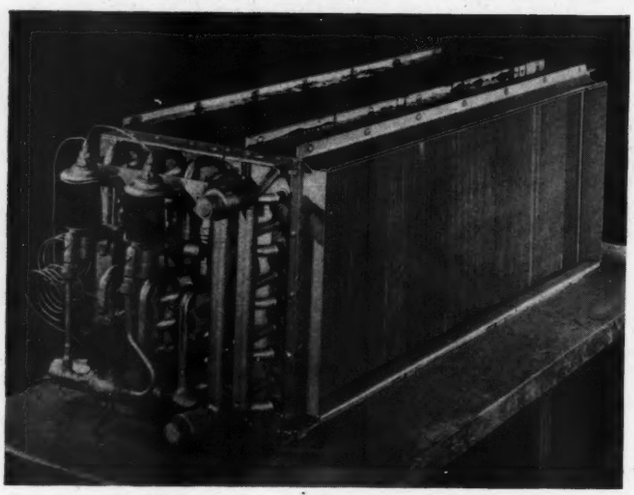
"You are all familiar with the history of the railroad monopolies which fifty years ago led to a farmers' revolt. The great difficulty in breaking that monopoly was due to the fact that the roadbeds were in private hands, and therefore had to earn dividends. The first bond issue distributed to innocent purchasers all over the United States had to be supported by raises in rates. There was no way of avoiding this without confiscation. In 1920 unusual increases in railroad rates resulted in higher industrial prices and contributed to the collapse of farm prosperity which followed. In addition to that, high freight rates forced manufacturers to locate in centers already crowded, having a short transportation haul or deep water navigation with low water rates. Industrial workers were thus increasingly located along the rim of the Nation and further from the source of farm production. This reversed the sound economic trend which might have balanced the farm market and given it parity, to wit, the location of industries in agricultural regions. It compelled railroads which had to pay dividends to discriminate in favor of the established industries which furnished them their revenue and against new industries which located away from great centers.

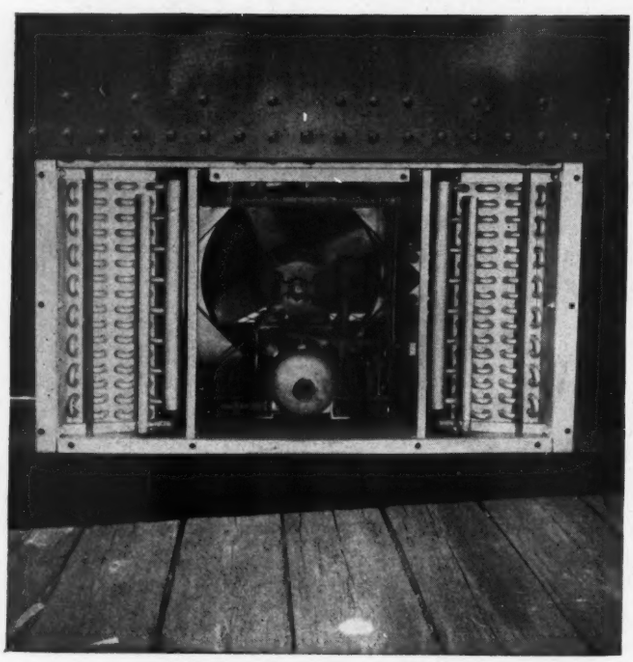
"In answer to this growing economic problem Agriculture used its influence for the improvement of navigable waterways by the State. It further threw its weight into the improvement of highways by the State. The middle West which had the longest haul to and from markets was the greatest beneficiary of these great public improvements. The rapidly developing motor and water carrier field during the past fifteen years was on the way

(*Continued on page 674*)

Air Conditioning with Continuous







A NEW system of electro-mechanical air conditioning for railway passenger cars, called the "Lundy Continuous Control System," has been developed by E. A. Lundy, Inc., and is distinguished particularly by its use of a Chrysler-Airtemp three-cylinder radial compressor which automatically operates on one, two or three cylinders, depending upon the demand for refrigeration. Complete on-and-off cycling is avoided and dehumidification is continuous. The evaporator is divided into two parts, a 45 per cent section operating at light loads and the full evaporator being in service when the cooling load is large. This causes the coils to operate always at a low temperature, thus insuring a constant removal of moisture from the air. The condenser and compressor are applied as separate units to insure adequate cooling of each and to facilitate their replacement under the car. The refrigerant used is Freon.

The system may be used with any type of control equipment and is here described as applied to 25 coaches now in service on the New York Central. Fifty-five additional equipments are on order.

Compressor

The compressor motor is a 10-hp., 72-volt, d. c. motor, controlled through a Westinghouse starting panel, which drives the compressor at constant speed through a V-belt drive.

The compressor is a three-cylinder, radial type unit which starts unloaded and automatically adjusts itself to the load, one cylinder at a time. The number of cylinders in operation is governed by intake gas pressure. This pressure acts upon a metal bellows, which admits oil from the pressure lubricating system to operate the loading device.

When the compressor is at rest, the ring type intake valve is held off its seat by eight small push rods. The rods in turn are raised by a cam and the position of the cam is governed by the pressure bellows. As the intake pressure rises, the bellows admits oil pressure to a small cylinder which moves the cam, allowing the intake valve of one cylinder to seat. This cylinder then goes to work. If the intake pressure continues to rise, the second and third cylinders will go to work in sequence. Conversely, as the intake pressure falls, the cylinders will unload, one at a time.

The crankshaft is short and stiff and is dynamically balanced. The crank bearing is outside the main bearings, and there is a floating bushing between the crank bearing and the three solid-end connecting rods.

Pistons are fitted with a single compression ring. Valves operate without flexing and are loaded with coil-type springs.

Lubricating oil is carried to the main babbitt-lined steel bearings under pressure and through the rifle-drilled crankshaft to the connecting rod bearing. Oil escapes from the connecting rod bearing as a mist to coat the cylinder walls and crankcase.

TOP — The 3-Cylinder Radial Compressor — CENTER — The Evaporator Showing the Valves Used for Adjusting the Flow of Refrigerant and for Cutting Out a 55 Per Cent Section on Light Loads — BOTTOM — The condenser Unit with Its Motor-Driven Fan, Mounted Under the Car

Interior of One of the New York Central Coaches, Showing the Air-Distribution Outlets

Unloading compressor affords improved temperature and humidity conditions at high operating efficiency

The shaft seal is a metalized carbon-to-metal seal, spring-loaded with special provision for cool operation.

The gear-type oil pump will operate in either direction, and this allows the compressor to be run either way.

The compressor operates almost without vibration and there is no increase caused by operation on less than three cylinders. Its capacity is seven tons.

Condenser and Evaporator

The condensing unit is mounted under the car apart from the compressor and motor assembly, to allow for better weight distribution, to facilitate maintenance, and to secure better condenser cooling in hot weather. The condenser cooling fan is driven by a 1-hp. d. c. motor.

The evaporator is located in the clerestory. It has two cooling coils which are joined structurally, but which operate with separate pipe connections and separate controls. When the cooling load is light, a 45 per cent section of the evaporator is used and after the load passes a predetermined value, the entire evaporator is made operative. In this way coil temperatures are kept at a low value and continuous dehumidification is sustained. An adjustable flow control valve provides for equalizing the flow of refrigerant through the several sections of the evaporator. There is also a heating coil of the header type which has a capacity of 80,000 B. t. u. per hour.

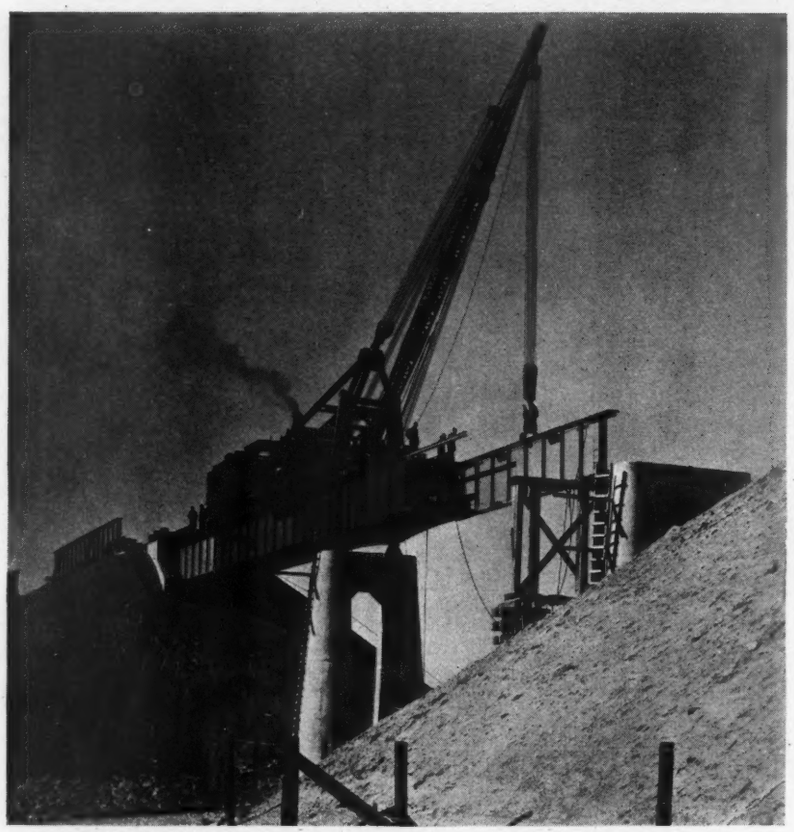
The evaporator and heater blower fan is a dual centrifugal unit driven by a ¾-hp. d. c. motor. The quantity of outside air supplied is 600 c. f. m.

Air Distribution

Conditioned air is carried from the evaporator by a central overhead duct and is distributed through the car by a number of Aerofuse outlets located at intervals in the ceiling. These are flush-mounted diffusers which consist of a series of specially shaped annular rings. The supply air is delivered in a series of concentric jets, each jet turning outward as it leaves the diffuser, so that the air follows a path which approximately parallels the ceiling. The return air grille is located in the ceiling below the evaporator.

(*Continued on page 675*)

Bridge and Building Officers Prepare for Any Emergency



Erecting One of the Three Bridges on the Recently Completed 20-Mile Line Change on the Santa Fe Around the John Martin Reservoir Project in Colorado

Hold intensive three-day meeting in Chicago to consider seven reports and seven addresses dealing with methods, materials, labor and protection against sabotage — View large exhibit of bridge, building and water service equipment and materials

Part I

MEETING in an atmosphere charged with a realization of the enlarged problems and responsibilities that confront them as the result of the growing demands for rail transportation, which must be met without jeopardy of accidents or sabotage, members of the American Railway Bridge and Building Association met in Chicago on October 14-16, with an extensive program which included seven addresses, an equal number of technical reports, and several special features. Throughout the convention, which was attended by 215 bridge, building and water service men from widely scattered parts of the United States, the program was keyed to the new problems that confront these men in these days of fundamental changes in train operation, increased demands and the need for maximum safety. The meeting was held at the Hotel Stevens, and was supplemented by an exhibit of bridge, building and water service equipment and materials, presented by the Bridge and Building Supply Men's Association, as noted in the news columns of this issue. All sessions of the convention were presided over by H. M. Church, general supervisor bridges and buildings of the Chesapeake & Ohio, and president of the association.

Opening the convention, M. J. Gormley, executive assistant, Association of American Railroads, described the tasks that lie ahead of the railways, and predicted anew that the railways will not fail to measure up to these tasks successfully if they are permitted by the government to obtain the materials and equipment that will be required to enable them to do so. Other addresses were made by C. E. Smith, vice-president, purchases and stores, New York, New Haven & Hartford, on What We Are Facing in Materials; by P. O. Ferris, chief engineer, Delaware & Hudson, on Maintaining Forces in a Period of Widespread Demand for Skilled Labor; by A. O. Lagerstrom, architect, Chicago, Milwaukee, St. Paul & Pacific, on Railway Buildings in a Changing Age; by G. A. Haggander, assistant chief engineer, Chicago, Burlington & Quincy, on What We Can Do in the Face of a Shortage of Materials; and by A. E. Pierce, engineer water supply, Southern, who spoke on Modernizing Water Service Facilities to Meet Modern Operating Conditions. Technical reports were presented on The Protection of Bridges and Roadway from River Bank Erosion; The Possibilities of Off-Track Equipment in Bridge Construction and Maintenance; The Maintenance and Repair of Bridge and Building Equipment; Modernizing Small Stations to Meet Present-Day Requirements; Welding in Water Service; Efficient Methods of Transporting Bridge, Building and Water Service Gangs; and Recent Developments in Paint Removal.

Among the special features of the program were the annual luncheon on Wednesday, with 247 members and guests in attendance, which was addressed by E. P. Coffey, chief of the technical laboratory, Federal Bureau of Investigation, on The Protection of Railroad Structures Against Sabotage; a session on Tuesday night celebrating the Golden Anniversary of the association, which was addressed by C. R. Knowles, superintendent of water service, Illinois Central system, and a past-president of the association, on A Half Century's Achievements; the showing of films of the collapse of the Tacoma Narrows bridge, on Tuesday night; and the annual banquet of the association on Wednesday night, jointly with the Bridge and Building Supply Men's Association, which was attended by 222 persons. Still another feature of the convention was a "Summing Up" session on Thursday afternoon, addressed by Armstrong Chinn, chief engineer of the Alton, and a past-president of the association, who reviewed and commented upon the many constructive ideas developed during the convention.

New Officers Elected

At the closing session of the convention, R. E. Dove, assistant engineer, Chicago, Milwaukee, St. Paul & Pacific, and first vice-president of the association, was advanced to president; F. H. Soothill, chief estimator, Illinois Central system, Chicago, was advanced from second vice-president to first vice-president; G. S. Crites, division engineer, Baltimore & Ohio, Punxsutawney, Pa., was advanced from third vice-president to second vice-president; A. M. Knowles, assistant engineer structures, Erie, Cleveland, Ohio, was advanced from fourth vice-president to third vice-president; and Neal D. Howard, engineering editor, *Railway Age,* Chicago, was elected fourth vice-president. In addition, A. G. Shaver, consulting engineer, Chicago, was elected secretary, and F. E. Weise, chief clerk to the chief engineer, Chicago, Milwaukee, St. Paul & Pacific, Chicago, was re-elected treasurer. Three new directors were also elected to serve for two years: J. L. Varker, supervisor bridges and buildings, Delaware & Hudson, Carbondale, Pa.; L. E. Peyser, assistant architect, Southern Pacific, San Francisco, Cal.; and Martin Meyer, supervisor bridges and buildings, Chicago & Western Indiana, Chicago.

The secretary's report showed 594 members of the association in good standing, this number including 50 who had joined during the year. Chicago was selected as the convention city for 1942, and the following eight subjects were chosen for study by committees during the year: Wearing Surfaces for Building Floors, Platforms and Roadways; Rail Fastenings on Bridges, Pits and Turntables; Meeting the Demands for Increased Water Supplies in Fast Freight Service; Preventing Accidents Among Bridge and Building Employees; The Repair of Steel Bridges; The Conservation of Bridge, Building and Water Service Materials; Piles and Pile Driving; and The Cleaning of Masonry Buildings.

Abstracts of the president's address and the addresses by Messrs. Gormley, Coffey and Knowles, as well as greetings from the American Railway Engineering Association, the Roadmasters' Association and the Bridge and Building Supply Men's Association, and the reports of two committees, follow. Abstracts of the addresses by Messrs. Ferris, Pierce and Lagerstrom, and the five remaining committee reports, will appear in the issue for next week, while abstracts of the addresses by Messrs, Smith and Haggander, will appear in the issue for November 8.

Greetings from the American Railway Engineering Association were extended to the convention by H. R. Clarke, senior vice-president of that association, and engineer maintenance of way of the Chicago, Burlington & Quincy, speaking for F. L. C. Bond, president of the association, and vice-president and general manager of the Central region of the Canadian National, who could not be in attendance. Enlarged and difficult as the problems of bridge and building men appear to be today over those of a year ago, Mr. Clarke saw the possibility of added and still more difficult problems in the days ahead, not alone for bridge and building men, but for the railway industry as a whole—problems which, he said, "must be solved." He had no concern that bridge and building men would fail to measure up to any increased responsibilities placed upon them, stated that they are not scared—have the ability—have done a splendid job in the past—and are ready to do it again. "They know what the problems are," he said, "and, being forewarned, are forearmed."

A. B. Hillman, engineer maintenance of way of the Chicago & Western Indiana—Belt Railway of Chicago, and president of the Roadmasters' Association, brought greetings from that association, and, referring to the increased problems that lie ahead for both bridge and building men and the members of his association, said that there is not the slightest doubt but that the men in the maintenance of way and structures department will rise to the emergency as they always have in the past. After referring to the accomplishments of maintenance of way men during the lean years of the depression, with limited manpower and materials, and in spite of increased train speeds, he said:

"Now again we are being called upon to assist the operating department to transport, promptly and efficiently, the materials needed in the national defense program. This time, to keep cars rolling, our work must be carried on without hindrance to that department. There must be no interference with the operation of trains. We must do our work with the minimum amount of power and the minimum number of cars—and the cars that we do use, must be kept moving."

Speaking for the Bridge and Building Supply Men's Association, C. C. Rausch, Dearborn Chemical Company, and president of the association, urged members of the Bridge and Building Association to get the maximum benefit from the exhibit being held in conjunction with their convention, pointing out that the representatives of the companies exhibiting were anxious to answer their questions and help in the solution of their problems.

Golden Anniversary Celebrated

The Golden Anniversary ceremony on Tuesday night was addressed by C. R. Knowles, superintendent of water service of the Illinois Central system, and president of the association in 1922, whose remarks were supplemented by a large number of lantern slides of early members of the association and early convention groups. Mr. Knowles said, in part, as follows:

The American Railway Bridge and Building Association was 50 years old on September 25, and, with the exception of the Roadmasters' Association, is the oldest railway maintenance of way organization in existence. The founders of our association were imbued with the belief that there was a need for an organization of this kind, where they could meet and exchange ideas born of their combined knowledge and experience, and through this communion of ideas, help to insure the advancement of knowledge pertaining to the design and construction of railway bridges, buildings and other structures.

The result of the work of our association during the

last 50 years indicates that it was founded upon sound principles. In looking back over its Proceedings, which record its work from year to year, one is deeply impressed with the immense amount of work that has been accomplished. There has been remarkable advancement in the design and construction of railway structures during the last half century, and in this, our association has had no small part.

Although we can well be proud of the work of our association and the position it occupies in the railway field today, our work is not finished; it is hardly begun. Although the progress and development during our 50 years of existence have been remarkable, they are but little as compared with what we may expect in the future. The coming years promise even more progress, with which we must keep pace if we are to keep up with the procession of time. We have little to fear, however, if we will follow the same spirit of loyalty and devotion to duty that has been the outstanding characteristic of the membership of this association throughout the last 50 years.

President Church's Address

In his presidential address, President Church reviewed the work and achievements of the association, the changing problems that have faced its members over the years, and the increased demands and responsibilities that are being imposed upon them by changes in operating methods and the huge defense efforts of the country. He also stressed the importance of a complete understanding between employees and management, laying particular responsibility in this regard upon supervisors and foremen.

Speaking of changed practices in bridge and building work, and of present-day demands, Mr. Church said, in part, as follows:

"Bridge renewals and repairs must be programmed and scheduled to provide structures of a more permanent character. Untreated timber must give way to treated timber. Buildings used by the traveling public must be re-conditioned and improved through the use of new materials and equipment to provide an inviting atmosphere.

"Recent improvements in buildings are characterized by the use of many new materials, such as glass blocks, stainless steel, aluminum, chromium, and rubber in many colorful combinations. Asphaltum and asbestos wallboards and plywood are also being used to a greater extent. Creosoted and salt-treated gum wood, creosoted wood blocks, steel plates, and many concrete and bituminous products possess many advantages. There is also a trend toward modern doors of generous width, that will facilitate the use of tractors, motor trucks and trailers.

"As in the case of buildings, marked advance has been made in bridge construction and maintenance, involving new materials, power tools and machines. Tubular piles for foundations, aside from their other advantages, have expedited the use of off-track equipment. Steel piles of the "H"-section type, and reinforced concrete piles have brought about new practices in the design of piers and abutments. Flat-slab bridge decks and solid plate floors on steel spans, without ballast, are increasing in use. Modern fuel and water stations have outstanding economic advantages.

"The progress that has been made in water stations is exemplified in the water station of modern design, the introduction of automatic pumping facilities, and the great strides that have been made in water treatment. At a recent meeting, the Master Boiler Makers' Association reported that 262,500,000 lb. of scale-forming solids are being removed annually from treated locomotive boiler supplies, representing a reduction of approximately $35,125,000 annually in the expense of operating and maintaining locomotives."

Emphasizing the importance of the supervisor and foreman, and their responsibility in seeing that their men understand and co-operate in carrying out the contractural obligations between management and employees, Mr. Church said: "They are in direct contact with the workman, and on them rests the responsibility of seeing that the rules and working conditions are maintained and applied in a fair and reasonable manner. The results of proper co-operation between labor and management are increased industrial efficiency, lower costs, and a general trend toward a better economic system, in which it is possible for both employees and management to enjoy a sense of satisfaction in their jobs."

M. J. Gormley Opens Meeting—Appraises the Tasks Ahead

In an address opening the convention, M. J. Gormley, executive assistant, Association of American Railroads, speaking on, The Tasks That Lie Ahead of Us, characterized as "soothsayers" those in Washington who have loudly predicted the inability of the railways to handle the traffic during the present emergency, cited the record of the railways to date and the statements of members of the Interstate Commerce Commission to the contrary, and predicted that the railways will not fail to meet the requirements for rail transportation in 1942 if they are allowed by the government to obtain the necessary materials for the construction of new equipment and for the repair of equipment already on hand.

As to the accuracy of the various estimates that have been made regarding 1941 traffic and the traffic in prospect, Mr. Gormley said, in part, as follows:

"The Shippers Advisory Boards make quarterly estimates of the cars they expect to ship. For the last quarter of the present year their estimate is 11.8 per cent above the same quarter of 1940. Assuming that the Advisory Boards' estimate for the loading in this quarter will prove to be correct, then the loadings for the year 1941 will be approximately 42,184,000 cars. The estimate of the Research Bureau of the Office of Production Management is that 46,400,000 cars will be loaded this year. If the Advisory Boards' estimates are correct, then the OPM's estimate will prove to have been 10 per cent too high, or approximately 4,216,000 cars more than will be actually loaded. On the other hand, the estimate made by the Car Service division of the Association of American Railroads will, on this same basis, prove to be 1,285,000 carloads, or three per cent, less than the actual carloadings.

"In trying to get some idea of what the task ahead of us really is, let us take the estimate of OPM's Research bureau for 1942. This estimate shows that carloadings will exceed 1941 by 10 per cent. If we apply this 10 per cent increase to the actual loadings for 1941 as now estimated by the Advisory Boards, then the estimate of the carloadings for 1942 will be 46,400,000 carloads, instead of 51,100,000 as shown by the OPM Research Bureau's figures. In other words, on the basis of the information available today, and using the figures that I have referred to, we will load 4,216,000 more cars than we did in 1941. As a matter of fact, however, no one knows whether the present rate of increase in traffic will continue. At the same time, no

one knows how much the production for defense will curtail other traffic.

"In September, 1939, less than three weeks after the war broke out in Europe, the railroads told the public that rail transportation would be adequate for the traffic then in prospect, and that any additional equipment which might be needed as demands developed, would be acquired. They have made good on this statement to date, and they will continue to make good unless they are prevented by the government from obtaining the necessary materials for the repair of their present equipment, and for the construction of new equipment.

Protecting Railroad Structures Against Sabotage and Espionage

By E. P. Coffey*

The Federal Bureau of Investigation, under the direction of J. Edgar Hoover, was charged by the President in September, 1939, with the co-ordination and handling of all matters pertaining to sabotage, espionage and similar matters concerning our internal defense. You gentlemen are charged with an equally important task. It will be of little avail to produce and manufacture the defense needs of the nation if they cannot then be shipped successfully to points of greatest utilization.

The railroads of the nation constitute the great transportation system in our defense program. The protection of their bridges thus becomes one of the most important tasks in the present national emergency. When an important railroad bridge is attacked, it not only blocks current transportation effectively, but it becomes a major piece of engineering and reconstruction, requiring, perhaps, many weeks, if not months, before repair or replacement can be made.

I point out these things to you to emphasize the importance of your job, and to urge you to greater ingenuity and greater alertness in the protection of these strategic structures. Many of you already have plans under way for the proper protection and maintenance of bridge structures during this emergency. If you have not begun to plan this work, it should be started at once. You must not anticipate that the military authorities, the state or local police, or some home guard unit will protect your bridges. Of course, the railroads will not stop with the protection of their bridges. Their rights of way, docks, shop buildings, yards, roundhouses, terminals, and freight houses and warehouses are all important factors in the nation's transportation system, and for the very reason that they are important, become objects of possible attack by the saboteur.

Whenever any sabotage or attempt to sabotage occurs, no matter how small, it is important that the FBI be notified promptly so that its special agent may reach the scene of the crime early enough to make a detailed study for the clues which will lead to the identity of the saboteur. It is important, even though the attempt seems a minor one, for the reason that it may actually be found by agents of the bureau to be connected with a major operation being carried out simultaneously, throughout the entire country.

In planning the protection of your bridges against sabotage, it might well begin with detailed surveys, made now, in which you men, as experts on bridges, study the vulnerability and weaknesses of your structures from the standpoint of sabotage. This study should include the approaches along the right of way, a determination of the best manner in which the bridge can be guarded or patrolled. Consideration of the possibilities of attack from below is very important. Not only may supporting piers be fired or exploded, or cut by hand, but where rivers or streams are concerned, consideration must be given to the possibility of floating explosive or crushing devices against the piers, released from a point higher up the stream. A serious threat is that in which the bridge is wrecked or blocked by causing a heavily laden train to be wrecked as it crosses. Drawbridges require special attention to protect their operating mechanisms. Study should be made now to determine the weaknesses of your bridge structures, and plans made to strengthen them.

As the need for protection grows, it may be deemed necessary to guard many bridges, particularly those carrying the most important traffic and those in the most vulnerable places. These, possibly, will include the international boundary bridges and the huge bridges connecting key points, where a serious bottleneck is sure to result if any of them is rendered useless. In guarding these bridges, consideration should be given to the desirability of fencing approaches, and, in some instances, carrying this fencing at least partly into the water so that the legitimate openings through which trespassers might enter can be watched more easily. Proper lighting should be given study. At times, it is most effective in detecting trespassers, and is just as important in acting as a deterrent to frighten them away.

The planning and installation of safeguards and patrol systems is not enough. They must be rigidly maintained and strictly enforced. Frequent checks and inspections become necessary. The same alertness and enthusiasm that you expect in your men must be ever evident in yourself, or you will fail to inspire them.

* Chief of Technical Laboratory, Federal Bureau of Investigation, Washington, D. C.

Protecting Bridges and Roadway From River Bank Erosion

On the premise that the protection of railroad bridges and roadway from river bank erosion is vital to the maintenance and furthering of present-day train operation, with safety, the committee studying this subject, of which A. B. Chapman, office engineer, Chicago, Milwaukee, St. Paul & Pacific, was chairman, presented a broad review of the widely varying forms of damage to which bridges and roadway are exposed by high water and floods, and then described many of the expedients that have been found effective in preventing such damage. Among these expedients described were line changes; channel changes; loose rip rap; rip rap paving; willow mats; sand bags; fascines; check dams; pile cribs and dolphins; steel and timber sheet piling; concrete paving; concrete and grouted slag blankets; timber and rail, rock-filled cribs; shear fences; rail fences; steel jetties; various types of mattresses; velocity retards; timber current deflections; and fenders.

At one point in its report, the committee stressed the importance of periodic inspections of bridges and sections of line subject to flood damage, and of proper instructions to those who must cope with flood and high-water emergencies as they occur, and at another point it urged adequate stocks of emergency materials, strategically located, to repair flood damage, and pointed out that adequate facilities for quick loading and forwarding are essential. Concerning the necessity for proper precautionary measures whenever there is a threat to the railway's property, the committee said, in part:

"The protection of bridges and roadway from river erosion presents a serious problem to most railroads. As soon as it is determined that a bridge may be en-

dangered or the roadway washed away, the necessary protection should be installed promptly. Otherwise, interruptions to operation may occur, and heavier expense incurred in both emergency work and in subsequent permanent protection.

"The absence of extreme flood flows for a series of years in which rainfall is light, or uniformly distributed, is no assurance that severe floods may not occur. For these reasons, the installation of bank protection should not be deferred where indications are that a bridge or roadway will be undercut or otherwise endangered by a few more floods or continued high water."

In closing its report, the committee said that if the railroads today would pay more attention to providing flatter slopes in their cuts and on their newly-placed embankments, and, in many cases, would seed and sod slopes, as well as plant and encourage fast, easy-growing shrubs or bushes where small washes may occur, nature would take care of many of our problems of roadway embankment disintegration.

Modernization of Small Stations to Meet Present-Day Requirements

Reporting on the Modernization of Small Stations to Meet Present-Day Requirements, a committee, of which L. C. Winkelhaus, architectural engineer, Chicago & North Western, was chairman, called attention to the fact that, due to the depressed earnings of the railways during the last 10 years or more, the appearance of the facilities at outlying passenger stations has not kept pace with improvements in train service and equipment, and said that it is evident that improvements should be made at some of the more important stations to keep abreast of the times. In this latter connection, it cited the attractive and comfortable stations that are being provided by the bus and air lines, and pointed out that the advertising value of such facilities should not be under-estimated.

Beginning its report, the committee discussed the conditions surrounding the construction of many of the now outmoded passenger stations on the railways and the specific problems involved in their modernization. Among the many suggestions which it made in connection with the modernization of existing facilities, were the necessity of giving due consideration to the locations and surroundings of stations when preparing plans for improvements, to make the improvements conform with the environments; the elimination of one waiting room where two exist; the substitution of new floors of wood or concrete, or the provision of new floor covering; the refacing of exterior and interior walls with modern materials; the substitution of modern windows and exterior doors for existing outmoded facilities; the modernizing of dormers, gables and eaves to remove earmarks of an earlier era; the substitution of open-top ticket counters for ticket office enclosures; the use of comfortable and attractive furniture and modern decoration and lighting; the elimination or reduction in the size of platforms and canopies, where possible; and the overhauling of toilet facilities.

Relative to waiting rooms, ticket offices and interior decorations, the committee said, in part, as follows:

"Where two waiting rooms are in use and the ticket office is mid-way between them, there is little that can be done to improve the general appearance unless the office enclosure is entirely removed. Where it is possible to dispense with one of the waiting rooms, or to make one general waiting room, the ticket office can be constructed across one end of the area, providing a pleasing appearance.

"In any ticket office, it would seem that the ticket windows could be made more attractive by removing any grille work and substituting a glass panel, with an opening at the counter level and another opening for a 'speak-hole.' A variation would be horizontal strips of glass, about two inches wide, set about an inch apart.

"Within recent years, a number of new types of wall and ceiling coverings have come into the market. Some of the more popular types of new wall coverings are pressed woods, scored wood, cane fibre boards, and boards composed of cement and asbestos fibres. The last named material can be obtained in a number of different colors, such as light green, buff, rose, grey and black. The other materials can also be obtained in various shades and designs.

"Decoration is a vital factor on the appearance of station buildings, both interior and exterior, where the public interest is paramount. The present trend is toward colors—even bright colors. Most of the materials now available for inside walls, ceilings and floor coverings are colored. Lighting fixtures are also an important part of modernization, because regardless of how much a room is refurnished, old style or ordinary commercial lighting units will nullify the appearance."

Referring to toilet facilities, the committee recommended floors of impervious materials; walls and ceilings of plaster or other impervious materials; toilets with low tanks, open-front seats and flush valves; floor- or pedestal-type urinals with automatic flushing devices; and attractive plumbing features in harmony with the color scheme employed throughout the room generally. In closing its report, the committee said that it is evident that improvements should be made to some of the more important stations to keep abreast of the times.

* * * *

Diesel-Electric For "The Farmers' Railroad"

The 28-mi. Arcade & Attica, which is owned by farmers in its territory, recently placed in service this 44-ton, 380-hp. locomotive built by the General Electric Company to haul its two mixed trains daily.

Traffic Clubs in Annual Session

Milwaukee convention wants all forms of transportation left in private hands

VOTING unanimously, the convention of the Associated Traffic Clubs of America approved a resolution against government ownership of any form of transportation, at their 20th annual meeting, held at the Hotel Schroeder, Milwaukee, on October 20-22. They voted further to do everything in their power as clubs and as individuals to keep transportation in private hands. Over 700 delegates and guests, from nearly 70 of the 103 clubs forming the national association, were in attendance when President C. R. Musgrave, (vice-president, Phillips Petroleum Company) called the meeting to order. The president urged that there should be not only co-operation between the shippers and the railways, but also between the railways and competing forms of transportation for the period of the present emergency, at least.

Following the welcoming of the delegates to Milwaukee by George C. Heiden, president of the Milwaukee Traffic Club, the mayor of Milwaukee, Carl Zeidler, told the delegates that what was needed today in transportation, as well as in every other industry, is some clean-cut, definite program—a clearly defined blueprinted plan aimed at the elimination of confusion, so that America will know where it is going.

Among the speakers at the convention were Ralph Budd, transportation commissioner, advisory commission to the council of national defense; Elmer A. Smith, general attorney, Illinois Central, whose subject was: Trainload Freight Rates; W. J. Williamson, general traffic manager, Sears, Roebuck & Company, on New Problems in Handling Merchandise Traffic; H. A. Hollopeter, traffic director, Indiana State Chamber of Commerce, on The Interterritorial Rate Problem; and George E. Talmage, Jr., director bureau of water carriers, I. C. C., on The Administration of Part III of the Interstate Commerce Act. An inspirational address on What Is It To Be An American?, by Charles Milton Newcomb, featured the annual dinner Tuesday evening.

Among other business of the association was the adoption of a resolution to the effect that each club and each club member should work towards the end of keeping the Interstate Commerce Commission free of politics. Alarm was expressed at the finding of the Dies Committee that there are ten Communists on the staff of the I. C. C.

The usual spring meeting of the associated clubs will be held in Louisville, Ky., on April 20, 21 and 22, 1942. The next annual meeting will be held in Baltimore, Md., October 19, 20 and 21. As is customary, special sessions were held for the editors of traffic club publications and of club educational committees. President Musgrave and Executive Vice-President F. A. Doebber (traffic manager, Citizens' Gas and Coke Utilities) were re-elected to direct the affairs of the association for another year.

Elmer A. Smith, general attorney, Illinois Central and past president of the Association of Practicioners before the I. C. C., in discussing new price policies for the railways, outlined the policy of the I. C. C. in this respect since that regulatory body was formed. Describing the facts in the Molasses Case and the Southwestern Petroleum Case, both of which involved rates lower than carload rates for movement of cars in quantities from one consignee to one receiver, Mr. Smith stated that the Commission is showing evidences of a realistic approach to the problems of the railways under existing conditions of competition and trade. He quoted from the decision in the Molasses Case, as follows: "We find that there is nothing unlawful in the establishment of railroad rates on a quantity larger than a carload, when moving as a single shipment. . . ."

Mr. Smith continued: "The Commission's decision in the Molasses Case constituted a sharp break with the past and a departure from the principles of ratemaking announced in its earlier cases. It permitted the railroads to establish a new basis for pricing their services, a realistic basis that took into consideration the changes in competitive conditions and in our economic organization that the years have brought about. The decision recognizes the fact that the railroads no longer have a monopoly in transportation, that there are available today many different kinds of transportation services, the rates for which may well vary, dependent upon the kind of service and the cost thereof, and that what a customer of the railroad is willing to pay for a certain service may depend in large part upon what he can get the job done for elsewhere.

"There are other considerations that must be borne in mind. The price policies of the railroads are not wholly within their control. These policies, and rightly so, must conform to the standards laid down in the Act. But the decision in the Molasses Case gives emphasis to the fact that while those standards remain, their application to the ever-changing world of trade and commerce may vary, dependent upon time and place.

"Many practical and difficult questions, of course, arise in connection with the establishment of quantity rates and rates for a restricted service. In this matter the Interstate Commerce Act has to meet not an evolution but a revolution in the manner in which trade and commerce are conducted.

"The decision in the Molasses Case has other implications that deserve some notice. It is the very epitome of the kind of cases that now occupy the time and attention of the Commission—cases involving the relationship between the rates of competing agencies of transportation, and the efforts that the railroads are making to adjust their rates to meet present-day conditions, not only of competition but of trade and commerce."

W. J. Williamson, general traffic manager, Sears, Roebuck & Company, spoke on the new problems involved in the handling of merchandise traffic. He said that the classification committee has done splendid work so far in streamlining the Classification, but that more work should be done, particularly towards a greater degree of grouping or generalization of commodities. He outlined what has been done with regard to various classification rules (Nos. 12, 13, 23 and 41) covering packing, minimum charges, etc.

On the subject of packing, Mr. Williamson said:

"Much of the fine showing that has been made in the matter of reduction of railroad claims for loss and damage has been due to better packing methods and materials used by shippers generally. The reduction of these losses reflects itself in our transportation rates and it is in the interest of all concerned to keep losses as low as possible."

Mr. Budd Speaks

Mr. Budd was introduced by H. A. Scandrett, trustee, C. M. St. P. & P., and spoke as follows:

"In considering the subject of transportation during recent years there should be kept in mind, among other things, the following:

1. A rise in volume of traffic began in the summer of 1939 and continued at a rapid rate for two years, with the result that total carloadings for the 12 months ended June 30, 1941, were 39,293,642, compared with 31,490,246 for the 12 months ended June 30, 1939, an increase of 24.8 per cent. Carloadings in June, 1941, were 36.9 per cent above those of June, 1939.

2. The large and sudden increase in traffic was handled promptly and the shippers were able to use those carriers which they preferred in practically every instance.

3. The carriers were able to move the increased business without extensive enlargement of plant because of the greatly improved character of their facilities, and because a better utilization was made of them, than ever before.

4. Beginning in April, 1941, the new car and locomotive program which the railroads had undertaken, was delayed by the inability of car and locomotive builders to obtain the necessary materials to carry it on at the scheduled rate.

5. On October 1, 1941, when the railroads had endeavored to have an ownership of 1,700,000 freight cars, they had 1,675,630, the deficiency of 24,370 cars being due entirely to slowing down in output of car building plants.

6. Deliveries of new freight cars during September, 1941, were 5,168, instead of 14,000 as had been contemplated. Owing in part to strikes, the August deliveries were only 3,886 cars. The monthly average for the first three-quarters of the year 1941 was 4,943, while in March, 1940, before the National Defense program was launched, the builders delivered 6,548 new cars.

7. The same general difficulty as that with materials for building cars prevailed as to locomotive building, and in lesser degree to maintenance and improvement of the fixed property-roadways and structures.

The capacity of the country's transportation agencies must be kept in balance with the capacity for production in industry and agriculture. The primary question from the outset has been "how much is traffic likely to increase, and how rapidly?" That still remains the first thing to know in order to plan most intelligently for the future. Unfortunately it is not capable of determination with any degree of precision so it is necessary to make the best estimates possible. The records of the past two years may throw some light upon the subject, especially as they are related to some earlier years. Railroad carloadings still afford the best means of gauging traffic in this country, first, because the railroads handle about two-thirds of the total, and second, because these data are readily available. While carloadings do not reflect ton miles they do represent the units which the railroads handle in trains.

What direction the trend of carloadings will take in the future is of paramount importance to all of us, and for the matter to everyone in the country. Unfortunately, there is no way of determining with any degree of accuracy whether the graph will continue to rise, and if 1942 will be as far above 1941 as 1941 has been above 1940, or whether the leveling off process which has taken place during the last few weeks will persist for some considerable time. Forecasts have been made by the Bureau of Research and Statistics of the Office of Production Management that 51 million carloads of freight will be offered for handling in 1942. That would be an increase of about 20 per cent over 1941, and is based on the Defense Program, including Lend-Lease, and the probable effect on civilian purchasing power of the larger payrolls.

Those who think the leveling off process will continue, believe that adjustments due to shortage of materials are being felt seriously in civilian production, and that until some plants, which cannot obtain material for their ordinary lines, become active in defense work, there will be such a lessening in output on their part as to reduce appreciably the total traffic of the country. It is important to keep in mind that this lag may be of relatively short duration. It seems certain that the enlarged capacity of farms, smelters and mills will result in a corresponding increase in total volume of traffic, although such increase will come somewhat gradually because of the length of time required to increase the capacity for making steel. It is estimated now that about 3 million tons more steel will be rolled in 1942 than in 1941, and that larger smelting and rolling capacity up to 10 million tons annually may be available during part of the year 1943.

In view of the uncertainty, and disagreement of experts, there seems but one wise course for those who are responsible for transportation, and that is to prepare for the larger of the estimated requirements, rather than for the smaller.

Three major policies have been followed to increase the effective capacity of the railroads:

(1) Repairing as many cars as practicable and putting them back into service. For example, 12.1 per cent of railroad owned freight cars were reported unfit for service on October 1, 1939, and 8.1 per cent on October 1, 1940, while on October 1, 1941 only 4.4 per cent were so reported.

(2) Building new cars. During the 12 months ended October 1, 1941, there were put into service 71,519 new freight cars. As a result of these new cars and the large amount of repair work, the number of serviceable cars owned on October 1, 1941, was 1,602,611, compared with 1,510,476 one year earlier, an increase of 92,135.

(3) Making better use of the cars by keeping them on the move a greater part of the time, and loading them as heavily as possible. It is in this effort that the most effective possible co-operation is needed on the part of shippers and carriers. Generally speaking, the cars are in the hands of the shippers about half the time, so it may be said that the two groups, shippers and carriers, have equal opportunity to contribute to the cause of better utilization. The co-operation of all parties has been splendid, with the result that during the last month for which figures are available, August, 1941, the average movement per car per day was 44.1 miles, compared with 35.3 miles in August, 1940. Incidentally, this recent showing is an all-time high for average movement per car per day on American railroads and it could not have been made without the forthright assistance of the shippers.

N. E. T. Opens Terminal at Boston

New Haven highway affiliate builds combination garage and transfer station to handle greatly increased traffic

THE New England Transportation Company, a motor transport subsidiary of the New York, New Haven & Hartford, opened a new combination garage and freight station in Boston, Mass., on July 15, which has the unique advantage of providing facilities designed specifically for the requirements of an over-the-road operator and is also equipped with railroad tracks for rail-highway interchange. In August, the new terminal handled 4,461 net tons of freight, of which 1,374 tons were inbound truck shipments; 1,882 tons outbound truck shipments and 954 tons inbound by railroad cars. Included in the total tonnage are 2,873 tons of railroad freight carried by N. E. T. in substitution for way freight service. N. E. T.'s traffic volume at Boston has about doubled in the last six months.

Located just off Congress street, next to the New Haven's freight house No. 7 in South Boston, the new building houses a garage at one end, a one-story freight terminal at the other, and an agent's office on a second story in the middle. Garage and terminal are built of white brick and corrugated steel, while the office portion is of red brick. The whole building is 327 ft. long by 68 ft. wide.

The garage section replaces a maintenance building opened at Roxbury in 1931, when the bus operations of N. E. T. were of greater importance than truck services and location near the center of operations was not a pressing consideration. Since the trip between Roxbury and the truck freight station in Boston consumed more than 30 minutes, use of the new garage saves each truck approximately one hour daily in which its driver may be utilized for revenue service.

The garage is used for all maintenance work on some 32 trucks (including 12 pick-up-and-delivery vehicles of from four to six tons capacity and 20 over-the-road trucks of 9 and 10 tons capacity), except paintshop work which is performed at Providence, R. I. In the near future it is expected to take over the maintenance and care of ten buses now maintained at Roxbury. Space is provided for a maximum of 40 trucks, and a maintenance staff of 10 mechanics and cleaners is employed. The second floor office section—which is characterized by extreme simplicity—houses the offices of the freight agent and cashier and a driver's lounge.

Station Operations

The freight station portion is designed solely for speedy, direct transfer of goods between trucks and between trucks and railroad cars. On its street side is located a loading bay with tailboard space for 15 vehicles. The roof over the bay is 35 ft. deep and furnishes complete shelter for all trucks, including tractor-trailer combinations. Its street side is entirely open except for narrow roof supports, thereby furnishing wide doorways for convenience in maneuvering vehicles into position. These doorways are equipped with electrically-operated steel doors which roll-up vertically into the upper wall of the building.

Along the opposite side of the loading bay is a concrete freight platform having a width of only 27 ft., inasmuch as a minimum area for platform trucks to traverse was the prime consideration in its design; space for storage of goods, as in the typical railroad freight house, is not necessary. The farther side of this platform gives access to railroad cars on tracks adjoining the rear of the building through four doors in the corrugated steel wall. Use of connecting bridges permits the unloading of eight cars simultaneously.

Since one end of the freight platform adjoins the garage, an opening at that point in the partition separat-

New England Transportation Company's New Freight Station at Boston Handles 20 Road Vehicles Simultaneously. The Loading Bay Is Entirely Sheltered; In This View the Trucks Are Spotted Out Beyond the Roof For Photographing

The Agent's Office and Drivers' Lounge Are on the Second Floor in the Middle Red Brick Portion of the Terminal

ing the station from the garage permits loading and unloading five additional trucks which may be backed into position on the garage floor. Thus the station can handle a total of 20 trucks at one time.

The freight station is used for the following operations: (1) transfers between N. E. T. over-the-road trucks and N. E. T. p. & d. trucks; (2) transfers between N. E. T. over-the-road trucks and shippers' or contract trucks; (3) transfers between N. E. T. over-the-road trucks (4) transfers between inbound railroad cars (chiefly pool cars) and N. E. T. or independent trucks. A total of 57 pool cars were so handled in August. For platform movement of shipments in the latter category, N. E. T. receives a handling charge.

Advantages of New Station

Prior to opening the new terminal, N. E. T. utilized a neighboring New Haven freight station for these operations. Characteristic of the older type of city freight station, this facility had narrow doors separated by considerable blank wall space and capacious wood-decked platforms. As compared with it, the new station possesses the advantages of a design suited to its special function. Some of these are:

(1) Complete shelter for road vehicles during loading and unloading. Trucks and trailers can be left in position all night and lading is protected by the outside steel doors. In the converted railroad station, tailboard space was flush with street curb. Vehicles were parked in the open and had to be removed to the garage each night.

(2) Daylight during busiest hours by reason of wide doors and ample window space.

(3) Platform size and shape makes possible efficient use of hand trucks and reduces the distance between tailboards to a minimum.

(4) Availability of entire platform length for tailboard positions contrasts with restricted narrow doorway loading at old station.

(5) Closeness of garage and terminal makes possible a closer tie-up between maintenance and operating departments.

The entire facility is designed to take care of future business expansion of the subsidiary. What this expansion may be is indicated by the freight revenue history of the New England Transportation Company, which shows a steady year-by-year increase in freight gross revenues from $101,442 in 1929, when truck operations began, to $1,559,389 in 1940. At present the company maintains truck freight stations at 17 points, and opened a new type freight station in New York early in October.

This View Shows the Longitudinal Tailboard Space Afforded by the Platform. The Back Doors Lead to Railroad Freight Cars

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THE LATEST INNOVATION ON THE DINING CARS operated by the New York, New Haven & Hartford is the serving of "tenderay-ed" beef. The road has installed in its commissary at Boston, Mass., a unit manufactured by the Westinghouse Electric & Manufacturing Company, which is capable of "tenderay-ing" 1,000 lb. of beef each day. The new process, which was perfected by Westinghouse, "ages" beef in a fraction of the time required by former methods, with the additional advantage of freeing the meat from all bacteria and mold formation. "Tenderaying" is accomplished by subjecting the meat to relatively high temperature and high humidity in a specially-constructed refrigerator equipped with a complete air-conditioning unit and "Sterilamps."

Brotherhoods "On the Spot"

Railroads willing to arbitrate—Unions cling to privilege to decline Board's recommendation

FAILURE to modify even slightly their demands for wage increases and vacations and to agree to arbitration placed the 19 brotherhoods involved in the dispute in an awkward position this week. Although ample opportunity has been afforded the heads of the unions to alter their demands, they have remained obdurate throughout the hearings while the railroads have indicated a willingness to grant a small increase in pay now and consider vacations with pay later.

A climax in the proceedings before the President's fact finding committee was reached at 5 p. m. on October 18 when Chairman Wayne Morse made a brief statement encouraging arbitration. The suggestion that the parties arbitrate was the outcome of a discussion by the members of the Board while in executive session on October 14 as to the procedure which it should follow in offering mediation or arbitration services in accordance with the President's letter of appointment and direction of September 11.

Oral argument was momentarily interrupted on October 21 when Board Member Joseph H. Willits withdrew upon receipt of word that his son had died. Mr. Willits will return to Chicago at the end of the week and assist in the preparation of the report to the President.

On October 22, the chairman, with labor and the carriers concurring, wired the President and secured a five-day extension of time for the preparation of the Board's report. Its report will be presented to the President on November 5.

The hearing ended on October 22, following the completion of oral arguments, and the Board began its deliberations.

The Proffer of Arbitration

"The Board agreed," the chairman continued, "that in due course of time the chairman should notify the parties that the Board stood ready and willing to attempt to mediate or arbitrate the issues before it, if all parties concerned desired to have the Board render such services. However, it was agreed that the chairman should make clear to the parties that if they authorized the Board to mediate or arbitrate the issues, such authorization would have to be subject to the condition that the recommendations or decisions of the Board in respect to the various issues would be accepted by the parties as a full and complete settlement of the case.

"Before closing the matter the chairman wishes to make perfectly clear to the parties what the Board means by mediation. The members of the Board would not, if the parties requested the Board to serve as a board of mediation, function as mediators in the sense that the term is usually used in labor negotiations. Of course, it would be obviously a very serious mistake for this Board to sit in the capacity of a board of mediation, which procedure necessarily entails the making of compromise proposals by the Board in an endeavor to get the parties to adjust their differences.

"The Board does not propose to do that. If the parties should wish to use the good offices of the Board in passing through the Board various proposals and counter-proposals for a settlement of their differences, without the Board in any way recommending or passing a value judgment upon any of those proposals or counter-proposals as submitted by the parties, the Board would have no objection to functioning in such a capacity.

"However, if the parties decide to ask this Board to make an attempt to adjust the differences now existing between the parties, to the end of attaining a final settlement of this dispute, the Board will be willing to do so, upon the request of the parties. However, the request that the Board sit in judgment upon this case and issue a decision comparable to an arbitration award upon the issues pending before the parties must come from the parties.

"Before closing this statement the chairman wishes the record to make very clear that the Board does not now recommend to these parties that they ask this Board to sit as a board of arbitration or as a board of mediation in the sense that the chairman has defined it in the foregoing remarks. We simply want the parties to know that we feel there is an obligation placed upon us as a board by the President's letter of September 11, 1941, to make a good faith attempt to adjust the differences existing between the parties to the end of attaining a final statement of this case before it is submitted to the President.

"I think it is clear to all concerned that if that should be done at the request of the parties and it resulted in a settlement of this case before it became necessary to submit a report to the President, such a result, it would appear, would be highly desirable from the standpoint of the President. Again I say we are not recommending it. We simply want you to know that if you wish us to exercise our good offices in the capacity to which we think the President refers in the paragraph of his letter of September 11, 1941, as quoted by the chairman this afternoon, this Board is at your services."

Railroads Willing to Arbitrate

At the opening of the session on October 20, J. Carter Fort, counsel for the railroads' committee on wages, agreed to arbitrate by "expressing the willingness of the railroads involved in the wage dispute to enter into an agreement for the purpose of making it possible for the members of the Board to act as a board of arbitration and decide the issues presented on the basis of the record." J. F. Johnston, carrers' counsel handling the vacation issue, said that the vacation committee of the three regions concurred in the statement made by Mr. Fort. A. M. Hartung, counsel for Railway Express

Agency, Inc., said that this agency, likewise, is willing to enter into a similar agreement.

The five operating brotherhoods, at the opening of the afternoon session, declined the proposal. Charles M. Hay, chief counsel for these brotherhoods said: "At the time the Mediation Board proposed arbitration the conference committee representing the employees rejected the proposal and expressed preference for a hearing of the kind now being conducted by the Emergency Board. This action of the committee was approved by the general chairmen of the several organizations. The position taken by the committee and ratified by the general chairmen is unchanged."

On October 21, Frank L. Mulholland, counsel for the 14 non-operating brotherhoods also declined the offer, saying that these 14 organizations adapted themselves to the procedure of the Railway Labor Act which appointed the Board and is desirous of continuing on that basis. These organizations prefer to have the Board continue as an Emergency Board.

Brotherhoods Want to Retain Strike Weapon

In making its suggestion, the Board, it is believed, has shown a desire to carry out the spirit and intent of the Railway Labor Act and the President's directions. At the same time, it is felt that while so doing the Board has placed the onus upon the unions if they should fail to accept the recommendations of the Board.

Although no explanation was made by the brotherhoods when they declined the Board's suggestion, off-the-record comments intimate that their strategy is to retain the strike weapon for its possible influence on the Board's recommendations. At the same time, comments indicate that the brotherhoods rely on a strike, which would interfere with the defense program, as a device for inducing the President to take action favorable to the brotherhoods if the Board's recommendations should fall far short of the brotherhoods' demands.

Oral Arguments

Oral arguments were made on October 21 and 22 following two days of rebuttal testimony given by nine witnesses for the brotherhoods. These oral arguments emphasized material included in the briefs which were filed on October 20. The brief submitted by the 14 non-operating brotherhoods contained 159 printed pages, that of the 5 operating brotherhoods 120 mimeographed pages, and the 3 briefs filed by the railroads on wages, vacations, and rules required 300 printed pages.

In oral argument on the brief filed by the 14 non-operating brotherhoods Counsel Mulholland said in part: "It is true that the railroads have experienced a depression (which their employees have cause to remember even more vividly than they). It is true that forms of competition exist today which did not exist in an earlier era. These facts, however, lose their significance when contrasted with the more vital fact that the railroad industry in 1941 occupies a business position which is more favorable in the matter of traffic, revenues and prospects than at any time in its recent history.

"There can be no question but that the great physical improvement of the railroad plant, both accomplished and contemplated, has an important bearing on the operating efficiency and the long time financial stability of the industry. Why do the railroads make and propose to make tremendous expenditures in the face of the depressed conditions which they prophesy for the immediate future? An industry whose leaders actually anticipate depressed conditions is more likely to devote existing surpluses to a policy of retrenchment, which, in the case of the railroads, might well take form of the quiet purchase and retirement of bonds which proved such a thorn in the side of the industry during recent depression years and which we are now assured can be bought "virtually at depression levels." The existence of this great rehabilitation program, therefore, casts substantial doubt on the good faith of the railroads' predictions of disaster to come.

"Wages are paid according to certain standards, social and economic. The public generally requires that wages be paid which will supply a decent living standard consistent with health and good citizenship. The principles of economics require that wages be kept at levels which are consistent with those paid in other industries for the same general type of service and levels which conform to the degree of skill of the workers themselves. These are the factors which are relevant to a determination of a fair wage. The rate of return enjoyed by the employing company is no more a factor in the fixing of wages than it is a factor in fixing the prices of iron or steel, commodities for which the railroads must pay the same price as other users, regardless of their corporate earning power. It is the function of management and capital to meet and solve the problems of business fluctuation, competition and technological progress. If no solution can be found, it is upon the investor, not the wage earner, that the loss must fall."

Operating Brotherhoods Argument

The brief of the 5 operating brotherhoods dealt with the five considerations upon which they base their contention that operating employees wages do not fairly and adequately compensate them for the services they render. These considerations are: (1) "The kind and character and characteristics of the work; (2) the increase in the service performance and responsibility of the men since the fixation of wages at substantially the present level; (3) the increased service performance which is being demanded, and will be demanded of them in the emergency period, upon which we have entered and which will undoubtedly continue for many months and probably for many years; (4) the wages paid and wage trends in other industries; (5) the rise in the cost of living which has already ensued and the certainty of further marked rises."

Counsel Hay, in oral argument, said in part: "It is sheer nonsense for a railroad president to represent to this board that the operation of a long, heavy, fast freight train or a furiously fast passenger train does not require a higher degree of alertness, vigilance and capacity to make quick, sound decisions in emergency than are required in the operation of smaller, slower trains. Any man who has ever driven an automobile at more than one speed knows that.

"The contention that the emergency is temporary and the increased traffic both temporary and artificial is no answer—for the reason, as we have shown, that there was a large increase in performance of the men before the emergency occurred. The men are entitled to an increase in pay whether the emergency ends tomorrow, next year, or 10 years from this hour. The emergency may have something to do with what the roads have left after they pay a fair and just wage for the services rendered, but it has nothing to do with determining what constitutes a fair wage, except to increase the service performance of the men which entitles them to a still further increase.

"Our position is that no wage should be considered

inflationary so long as it constitutes no more than fair and reasonable compensation for services rendered. That's all the men are asking. They are entitled to have their present wages raised to that level now—effective as of July 10, 1941. If they may not justly ask for an increase to a level in a period of prosperity and rising profits and prices—when may they do so?"

Carriers Argue Vacations

Counsel Johnston argued that the carriers do not dissent from the opinion that vacations are desirable but that they are precluded by the emergency as indicated by a statement of policy made by the Office of Production Management which calls for the conservation of material and men. Vacations, he said, would slow down shops engaged in building and repairing cars and locomotives. It would be difficult to secure relief workers because furlough lists are exhausted. Railroads are unwilling to compete with defense industries in the labor market. The vacation proposal, he continued, would interfere with the efficiency of the carriers since it presents management problems that would interfere with operations.

As applied to employees not steadily employed, he said, the plan is without meaning. A total of 180,000 persons who worked in 10 months or less of 1939, 38,000 who worked in one month and some who worked a few weeks or days would have received vacations. The Board, he concluded, should recommend that the formation of a vacation plan be deferred until after the emergency.

Rule Changes and Minimum Changes

In arguing rule changes and a minimum wage, W. T. Joyner, counsel for the carriers, said:

"We ask that the finding of fact be made in the rules dispute to the effect that the evidence as presented by the carriers, discloses a situation which seriously affects the carriers, the employees and the public. It is a situation which should receive the serious effort on the part of each party to compose the difference between them. The Board should find that the rules matter should go first to conference between the parties and there receive again honest effort to compose the differences and then, if these fail, go into mediation. We ask that this Board also find as a fact that, should the parties fail to compose their differences and should they fail to get together in mediation, the parts in dispute left after mediation should be arbitrated.

"We think that the minimum wage issue is a thing separate and apart from the overall wage increase. We think that it permits and deserves separate consideration. It is my view that the real issue in this case on wages is the question of an overall increase or no overall increase or how much overall increase or what portion, rather than a question of a minimum.

"The approach to the minimum for the 14 non-operating unions could be made by one of two channels. It could be made from the purely social approach, and that is the minimum living wage approach. They have not taken that approach. It was not open to them. Congress has said that no industry engaging in interstate commerce may pay less than so many cents per hour, and that is irrespective of whether the industry can exist under that or not. The present minimum under the statute is 36 cents.

"The second approach is from a collective bargaining angle as between parties as to what minimum wage, in right and justice, ought to be paid considering all of the circumstances.

"The 14 non-operating brotherhoods must show that prior orders or adjustments which have resulted in the present labor system of pay on the railroads were unfairly discriminatory on lower paid people, or that since the last judgment on that existing system there have been changes in conditions peculiarly applicable to these classes and not applicable to the others. We have an existing wage scale and before that wage scale should be upset and one class of employees is given preference over the other they must show one of two things: (a) Something radically wrong in the creation of the old system or (b) recent changes in conditions which are peculiarly applicable to those classes for which the preferential treatment is sought.

Security Holders Have Rights

Allan P. Matthews, counsel for the carriers, said:

"If the cost of the vacation program is included, the annual addition to the expenses of the carriers will approximate $900,000,000. The prospective net railway operating income of these carriers for 1941 will be about $1,000,000,000. Therefore, the wage demands contemplate the appropriation of practically all of the expected net railway operating income.

"This means that after the payment of wages and other operating expenses and taxes, there would be virtually nothing left with which to pay fixed charges and certainly nothing for the stockholders. The industry as a whole would be upon a deficit basis. If we capitalize this proposed wage increase at some such rate as 5 per cent, we note that it represents a return upon $18,000,000,000 of capital, a sum only a little short of the total net capital in the hands of the public. This is nothing other than confiscation.

"Those who sponsor this wage increase program seem entirely to disregard the just rights of security holders. They seem also to take no account of the essential welfare of the industry. They take no heed of the unpaid depression debt, necessarily incurred in the struggle of the railroads to survive and amounting as of this date to several hundred million dollars. The philosophy which appears to be dominant in this program is that labor should take for itself virtually the entire earnings of the industry, alike in good and bad times.

"Ownership is entitled to just treatment and such just treatment has already been too long deferred. If ownership rather than labor must bear the brunt of the shrinkage in earnings in periods of depression, surely it is entitled to fair returns in times of business activity.

"That the railroad industry stands in imperative need of reestablished credit, and that this can be achieved only by a substantial improvement in net railway operating income, is another proposition that need not be debated on principle.

"Why is there need for better credit? It is needed in the public interest, so that the railroad plant and equipment can be modernized and improved and that the service may be made more efficient and economical. It is needed by railroad labor in order to increase the number of employees on the payrolls and to bring about the greatest possible stability of employment."

Railroad Industry Far Reaching

Mr. Fort, chief counsel for the carriers, said:

"The question of reasonable wages does not lend itself to solution by formula for judgment and discretion are factors. We like to see employees secure more money but only if the securing of its does not hurt some one

else. An adjustment should consider the long time position of all employees.

The railroad industry is broad in scope and its conditions is reflected widely. Its employees total more than 1,000,000 and they spend their money in every crook and cranny throughout the United States. Railroad securities are held by individuals, insurance companies and many other organizations. Not the least of the factors that make the industry important are the employment opportunities. Employees are contented. There is no caste in the railroad business.

"Employees enjoy retirement and unemployment systems that are more favorable than those enjoyed in other industries. They are protected by statutes.

"The purpose of this case is to obtain increases in pay for every man. The demands do not take into account the nature of work. About 80 per cent of the increases demanded would accrue to those who enjoy extraordinary stability of employment and who make $1,840 or more a year."

Express Demand Should Be Denied

Albert M. Hartung, attorney for Railway Express Agency, Inc., said:

"The record clearly establishes that the wages of express employees are the highest they have ever been; that they are higher now with relation to the cost of living than they were in 1929; that they are higher generally than the wages of employees engaged in similar work in other industry; that the express industry cannot stand any general increase in wage rates, which would be met only by an increase in express rates, and that such an increase would be a serious disservice to the industry, but more so to the employees, many of whom after being awarded higher rates of pay would suffer loss of employment. Therefore, this Board should find and recommend that the request of the employees be wholly denied."

National Emergency Precludes Vacations

The demands for vacations should be denied on the ground that the existing national emergency precludes releasing men from their employment for that purpose, according to testimony by C. D. Mackay, assistant vice-president of the Southern. After the termination of the emergency, the employees can renew their demands and the whole matter can then be considered in the light of conditions that then prevail, he said.

The railroads' opposition to the employees' proposal for vacations with pay was based upon the fact that it is "ill-conceived, uneconomical and unworkable, largely ignores the practical requirements of railroad operation and the great complexity of administration problems involved and violates the basic principles that must be adhered to in any practicable vacation plan."

The principles which the employees' proposals violate, Mr. Mackay said, are as follows:

(1) The sole justification for a system of compulsory paid vacations is to permit rest and recreation to employees whose work is regular and uninterrupted. Therefore, any vacation agreement must be framed to encourage the granting of vacations rather than to merely result in payment in lieu thereof. The only way this can be accomplished is by framing the provision so that it would not be more expensive to grant vacations than to keep the employee at work and pay him in lieu thereof.

(2) A vacation plan must accordingly be arranged for upon the most economical basis and employees should make their contribution to it by keeping up the work without added cost wherever and whenever that is possible.

(3) Management must have the unrestricted right to fill or not fill positions of vacationing employees, to the end that efficiency may be maintained and economy secured.

(4) Since other employees would receive the benefit of vacations themselves, they should be required to fill the positions of vacationing employees, in whole or in part, at their own rate of payment.

(5) While it might be possible in some instances to give senior employees preference in vacation dates, service and expense being of importance, it is necessary that vacations be assigned at times when relief is available and the work can best be kept up by other employees.

(6) In order to avoid confusion, disputes and excessive and unwarranted cost, any vacation plan should be complete in itself and cover the granting, paying for and relief work incident to granting vacations. Schedule rules should not be applicable.

(7) Any vacation plan for railroad employees should require a proper qualifying period of continuing actual service and a minimum number of days in which actual service was rendered in the previous year. In other words, an employee who does not work throughout substantially the entire previous year, should not be entitled to a vacation.

(8) Provision should be made for vacation pay on the basis of straight time compensation for regularly assigned hours only.

(9) Provision should be made for vacation compensation of employees on piece work so that "peaking" of vacation allowances, by extraordinary output or earnings in the period immediately preceding the vacations may be avoided.

(10) Provision should be made, in any plan which provides for payment of employees who are not granted vacations, so that such payment is limited to the amount which would have been received had vacations been accorded.

(11) Provision should be made to void vacations or allowances to any employee whose services are terminated prior to the beginning of the vacation year.

(12) Management should have the right to have employees take vacations at the time designated by the management and failing to do so, employees should forfeit their vacations or payment.

(13) It should be provided that vacations shall not be cumulative, it being impracticable for vacation time to be carried over and pyramided in subsequent years.

(14) Provision should be made for permitting the granting of simultaneous vacations to groups of employees through the closing down, in whole or in part, of any plant operation or facility.

Chairman Wayne Morse commented: "I have never attached much importance to the fatigue factor used in support of vacations for that is the argument of two decades ago. We have now moved into an era where vacations are very definitely linked up with at least the popular notion that they are consistent with the American standard of living and are consistent with the idea of giving to American labor a dignity and opportunity for pleasurable use of leisure time. They are also linked up with the notion that they do spread employment and do bring labor to even a greater support of your economic system."

Vacations, as proposed by the 14 non-operating brotherhoods, would cost the railroads $40,750,000 instead of $31,000,000 estimated by the brotherhoods. The railroads' estimate does not take into consideration the

increase in the number of employees and the days worked since 1940, and does not apply existing working rules which the brotherhoods wish to maintain. The total includes $17,800,000 a year for Eastern railroads, according to Earle B. Perry, assistant general manager in charge of personnel of the New York, New Haven & Hartford; $5,845,900 for Southeastern railroads, according to A. J. Bier, manager of the Bureau of Information of the Southeastern railroads; and $17,108,400 for the Western railroads, according to M. J. Byrnes, assistant to vice-president of the Great Northern.

30,000,000 Additional Express Shipments Needed to Meet Cost of Demands

A total of 30,000,000 additional express shipments will be required to meet the $31,000,000 that would be added to the payroll of Railway Express Agency, Inc., if the demands of labor upon this agency are granted, according to W. A. Benson, vice-president in charge of accounting. The dispute involved is over the demands of the Brotherhood of Railway and Steamship Clerks, Freight Handlers, Express and Station Employees, the International Association of Machinists, and the International Brotherhood of Blacksmiths, Drop Forgers and Helpers for a 30-cents per hour pay increase with a minimum of 70 cents an hour. Originally the dispute also included demands for vacations and a 44-hour week and counter proposals of the Agency to restore the 48-hour week and to make changes in its vacation plan covering certain employees but "because of the limited time available" these proposals were withdrawn on October 16 so that only the wage demand is before the Board.

Two conflicting opinions regarding accounting are involved in the wage dispute. The employees contend that express privilege payments to railroads should be considered profits and are ample to meet the wage increase demanded and that since the express company is an agency of the railroads, the Board should consider as in evidence all the wage data introduced by the employees in the railroad wage case. The Agency maintains, on the contrary, that the privileges are payments to the railroads for the service they perform and are not net income and that express employees are not railroad employees and should be considered by the Board independently.

In support of the contention that express privilege payments cannot support the wage increases demanded, Mr. Benson quoted Federal Co-ordinator Joseph B. Eastman's passenger traffic report of 1933 which showed that the aggregate costs incurred by the railroads exceeded by $54,264,000 the payments for express privileges received by them in that year. "It seems obvious," Mr. Benson continued, "that the present payments to the railroads fall short of meeting expenses of the railroads since they now receive less than 34 cents out of the express dollar, compared with 37 cents in 1933. Any additional increases in rates of pay will decrease the payments to the railroads for express privileges which are already substantially below the level required to compensate the carriers for the transportation of express."

Mr. Benson also testified that the average pay of 44,501 employees was $1,945 in 1940. By applying 30 cents an hour to the average compensation per straight time hour, he showed that the new compensation per straight time hour would be $1.11 for clerks, $1.05 for vehicle employees, $1.03 for warehouse and platform laborers and a $1.12 average for all employees. The cost of the demand would include $29,296,377 for over and straight time and a minimum time salary rate of 40 cents an hour, based on the year ending July 31, 1941, and $1,757,783 for Railroad Retirement and Unemployment Insurances taxes.

Mr. Benson also showed the disposition of the express dollar as of July 31, 1941, and after applying a 30-cents an hour increase and a minimum of 70 cents an hour. The division was as follows.

	For year ending July 31, 1941	After applying demands
Pay of employees	48 cents	63 cents
Other expenses and deductions	15	15
Taxes	4	5
Express privileges payments	33	17
	$1.00	$1.00

Prior to the formation of the agency, H. O. Head, president, testified express privileges payments were never less than 40 per cent and averaged about 50 per cent. Mr. Head also traced the decline in express shipments in recent years and cited a loss of 2,480,000 lb. between New York and Chicago from May to September, 1940. The emergency program, he continued, is having an affect upon the business of the agency because many businesses have been diverted from peace to wartime production with a resulting elimination of express shipments. At the same time, he said, many defense shipments that ordinarily move by freight and that are moving by express are swelling the revenues of the agency and creating a false impression. He cited a recent carload transcontinental express shipment of armor plates.

Mr. Head also showed that it is impossible for the agency to increase its rates to offset wage increases by describing the loss of business that occurred when rates were increased following a wage increase in 1939.

The situation is so critical, he said, that if the agency increases its charges 10 cents a hundred pounds and loses only one package out of the present eight it is now handling, the loss would entirely wipe out the added revenues expected by increasing the charges and would reduce employment.

Short Lines Say They Are Not Parties to Dispute

J. M. Hood, president of the American Short Line Railroad Association, appeared before the Board to contend that 19 short lines named are not parties to the dispute. These short lines, he said, take the position that there have been no negotiations on the property with respect to disputes between the organizations and the carriers concerning wages and vacations, and that these disputes should be disposed of on the properties. They take the further position that there has been no real attempt to mediate these disputes, and that there is, in fact, no reason why the disputes should have been certified to this Board.

These short lines want the Board to find:

1. The short lines should be treated separately and apart from the Class I carriers, so far as disputes regarding rates of pay and vacations are concerned.

2. There is no evidence of record from which the Board can make findings with respect to rates of pay and vacations, so far as related to Class II and Class III carriers.

3. There have been no negotiations between the short line carriers and the organizations with respect to the issues which have been certified to the Board. Likewise, there was no attempted mediation of these disputes.

4. The disputes certified to the Board, so far as they

relate to the Class II and Class III carriers, were improperly certified.

5. The disputes between the Class II and Class III carriers on the one hand and the organizations on the other, should be referred back to the carriers and to the organizations for adjustment on the respective properties.

Mr. Hood showed that the short lines face the same competitive conditions as do the Class I carriers. The number of Class II carriers, he said, has decreased from 310 in 1921 to 196 in 1939 and the number of Class III carriers from 423 in 1917 to 186 in 1939. The Class II railroads had deficits in 7 of 11 years from 1929 to 1939 and the Class III in every one of the 11.

Farmers Opposed to Wage Increase

The American Farm Bureau Federation believes that present railway labor wage scales, with the possible exception of the lower brackets, are fair and that railway labor should not seek and the Board should not recommend any wage scales that cannot be absorbed within the present freight rates and leave to the railways a fair opportunity for unsubsidized operation in the day of lessened revenue. The position of the federation was outlined by its president, Edward A. O'Neal, in a statement filed with the Board and included in the appendix to the record.

An increase of the magnitude sought by the unions would result in "an unwarranted increase in freight rates and a change in the services offered the shipping public," the statement read. "Because an increase in freight rates would mean a further addition to the tremendous burden of distribution costs which the American people are paying already, we, in agriculture, feel especially concerned," he said.

For many years, Mr. O'Neal went on, farmers have been waging a battle against increasing distribution costs, and if freight rates are increased on agricultural products, the farmers' share of the consumer dollar will become even smaller.

The farmer is vitally interested in preventing increased costs to the consumer for this reduces his buying power and demand for farm products, Mr. O'Neal said, citing the tendency in high farm prices to arouse consumer opposition.

Farmers regard railroads as the basic transportation facility of the nation, vital to more than 32,000,000 farm people. Also, agriculture means much to the roads. In 1940, the statement read, freight revenue from agricultural products totaled $682,000,000 out of total freight revenues of $3,678,000,000, or a little more than 18.5 per cent. Revenues obtained by the roads from farmers as consumers also were stressed.

Warning that almost every increase in rail wages, if not all, has been followed by increases in freight rates, Mr. O'Neal said that "If the railway employee applies sober thinking to the economics involved, he will see that his present demands are detrimental to his own ultimate best interest."

Mr. O'Neal reminded the committee that government ownership of the railroads has been opposed by the federation from the first annual convention in 1920 to last December. "But," he said, "we are apprehensive that this present wage increase proposal, if adopted, at some not too far distant day will force that issue upon the nation. With it will come difficult problems of taxation in the 3,000 counties and every state to which the railroads paid $236,946,106 in 1939. Thus, substantial revenues of our local governments may be impaired."

Arnold Lists Transport Practices He Dislikes

(*Continued from page 657*)

to breaking the railroad monopoly of transportation. Here was a method of transportation in which independent private enterprise could compete because the State had built the roads. The great automotive industry which was one of the few industries interested in low prices and maximum production had made it possible for anyone with a small capital to carry goods at competitive prices over the state-built highways.

"If these state-built highways are appropriated by private groups, the farmer will soon face an era of consolidation and exploitation similar to that which occurred in the '90's when private groups got control of the railroads. Here is an economic toll bridge which is lying around ready to be seized by private monopolists. The time is ripe because people are apt to forget the future in the immediate necessities of a world war. The organizations to seize these highways are already quietly being formed. You do not read about them in the newspapers yet. They have not as yet emerged from the secrecy of boards of directors. But if they are not stopped before the raid has been made, it may take twenty-five years to break the control which has been established when no one was looking.

"The Antitrust Division has already intervened in a proceeding now pending before the Interstate Commerce Commission to prevent private interests from taking the first step to dominate our highways. In that proceeding it is proposed to merge strongly competing truck lines operating in 19 states into one company which would have government-certificated operating rights over 24,338 highway miles extending along the Atlantic seaboard from the States of New York and Massachusetts on the north to Louisiana and Florida on the south. This proposal, if approved, would bring into being the largest truck line in the United States having a highway coverage and business drawing power sufficient to secure an unshakable hold on the long haul traffic in this territory.

"The outcome of this case is of first importance to every producer and consumer in the United States for the reason that it will blueprint for the future the pattern of "Government approved" motor carrier mergers of equal or even greater size. If this tendency towards monopolization of our highways is permitted, every consumer and producer will for the next fifty years have to pay higher prices because our highways will have been appropriated by a few corporations who control transportation services. The Antitrust Division today is representing the public before the Interstate Commerce Commission in an attempt to see that this appropriation does not take place.

"The attempt to monopolize our highways is not confined to the Atlantic seaboard. In the far West there appears to be an effort to combine trucking operations in a territory extending from Chicago to Los Angeles, San Francisco, Portland, and Seattle. We are now investigating this situation.

"The activities of the Antitrust Division in the transportation field is not confined to motor carriers. It extends to all carriers for hire, rail, water, air, and pipeline. The Division is the policeman on the beat to see that monopolists do not take charge.

"Another form of obtaining control of transportation services for the benefit of a few, is the conference or the bureau method of making railroad rates and adjusting competitive transportation practices. Within these con-

ferences usually one carrier is dominant. The others merely fall in line. All initiative in rate making is severely controlled. Motor carrier rate and tariff bureaus are patterned after these rail associations. The motor trucking industry has been highly competitive, not only with the railroads and other transportation agencies but also within itself. These rate bureaus are being used as a systematic effort to establish a uniform rate structure which will be noncompetitive with railroad rates. Individual carriers are here also denied freedom to initiate rate changes or to inaugurate new transportation practices.

"This method of controlling transportation rates and practices has, of course, no warrant in law. It should not be tolerated.

"The plan of the Association of American Railroads to eliminate all private refrigerator cars and create a monopoly of the refrigerator car supply in the privately-controlled General American Tank Car Company is of particular interest to farmer cooperatives. We are opposed to that plan.

"In somewhat the same category is the pending Pullman case, in which we charge that the Pullman Company has effectively prevented any new competitive manufacturer from getting started, and thus has been able to charge the public high prices for obsolete equipment. This is another illustration of how monopoly stifles initiative and restricts progress.

"Of interest to this association is also the Division's activities in the pipeline field. Nothing is more important to the farmer than the price of gasoline. In this vast midwestern area of Kansas, Missouri, Iowa, Nebraska, Illinois and Minnesota railroad transportation of gasoline was so expensive that pipelines were constructed by major oil companies to reduce the cost of reaching the consuming markets to the north. However, once the pipelines were built and brought under control, they adopted the rail tariff rates on gasoline. The savings were not passed on to commerce. They were confiscated by the oil companies.

"We believe that the exercise of such control over pipelines by the major oil companies gives the power to destroy independent competition, to dominate prices and marketing practices, and to modify or destroy the benefits which should accrue to all consumers from the use of pipeline transportation. We have therefore instituted suits under the Elkins Act to have these dividend payments to shipper-owners declared rebates. Three of these suits are now pending in the Federal courts.

"There are many other matters relating to transportation to which the Antitrust Division has and is devoting itself. For example, the Division instituted a civil suit against the Association of American Railroads and some 240 railroads to dissolve and enjoin a conspiracy to prevent co-ordination of rail and motor transportation. The effect of the Association's effort would have been to prevent the making of through rail and truck rates, thereby compelling farmers and other shippers to pay a combination of local rates higher than through rates. This proceeding was successfully terminated by a decree on June 18, 1941. Again in May 1940 the Association of American Railroads was induced, under threat of prosecution, to rescind a resolution of its Board of Directors designed in our opinion to suppress the competition of Seatrains, Inc., an agency for lowering costs in coastwise and foreign trade.

"One enormous cost to the consumer arises out of the use of private transportation facilities by private corporations who have their own trucks, barges, and ships. Through these facilities these corporations transport their products at a greatly reduced transportation cost, but these savings are seldom passed on to the public. The public pays to these corporations the full tariff rates of common carriers. Clearly some means should be found to compel these corporations to give to the public the benefit of their use of public highways and waterways, built at public expense, by honestly reflecting these savings in the prices of their products. This matter is now being investigated. The solution may necessitate additional legislation.

"Transportation is vitally affected by a few powerful labor unions who are at present immune from the antitrust laws. Today the teamsters are putting arbitrary charges upon trucks which carry farm products to the city. They are preventing farmers from grading their eggs, from selling their milk, from carrying their own products to and from the market in their own trucks. These restraints of trade are increasing. They are making alliances with other labor unions, which are effective because they control transportation, for the following illegitimate purposes which have nothing to do with wages, hours, health, safety, or the right of collective bargaining: (a) to enforce price fixing agreements and freeze channels of distribution; (b) to eliminate small competitors and owner operators; (c) to restrict the use of labor saving devices; (d) to keep more efficient materials off the market which might interfere with static jobs.

"Recently the Supreme Court exempted many labor activities from the Sherman Act, even where a labor union was putting an embargo on the use of more efficient materials and methods in building construction—indeed even where the strike was to compel an employer to violate an order of the National Labor Relations Board itself. This appears to be the law today. We cannot afford these impositions in this time of emergency. A rational antitrust program requires the passage of legislation to correct them."

Air Conditioning With Continuous Refrigeration

(*Continued from page 659*)

Cars are equipped with a Vapor control panel, a single panel providing controls for floor heat, and overhead cooling and heat. The floor heat is the conventional 3-position, manual selection floor heat. The overhead heat is modulated control.

For cooling, the cycling section of the evaporator (the 55 per cent section) is controlled by a differential thermostat which actuates a solenoid valve in the refrigerant supply to this part of the evaporator. This has a low limit cut-out which limits the 55 per cent section from operating at temperatures below 73 deg. The cooling system is provided with a 71-deg. low-limit thermostat which limits cooling of car to 71 deg. When the temperature is between 73 and 71 deg., the compressor operates on one or two cylinders. If the inside car temperatures drops below 71 deg. (under the cooling effects of one cylinder), the low limit will turn off the compressor motor.

Power Supply

Power for lighting and air conditioning is obtained from a General Electric Motor Generator consisting of a 20-kw., d. c. generator and a 15-hp., 3-phase, 220-volt a. c. motor. The motor-generator is driven from the axle by a Spicer gear drive. The battery is of the lead type, rated 600 amp. hr. at 64 volts.

NEWS

Outlines Scope of Transport Inquiry

Fees for highway use will be included in probe, Childe says

Speaking before the National Automobile Transporters Association at Detroit, Mich., on October 20, C. E. Childe, a member of the Board of Investigation and Research created by the Transportation Act of 1940, appealed for the cooperation and interest of carriers in the work of the Board which "considers it has quite a job on hand." Unofficially, Mr. Childe suggested that "maybe we won't have the complete and final solution by September 18, 1944," which is the limit of the term within which President Roosevelt is now authorized to continue the Board in existence by proclamation, i. e., two years beyond the September 18, 1942, limit set in the law.

Mr. Childe's address was a brief one in which he first outlined the Board's assignment, and then continued in part as follows: "We believe that our duties are of such importance as to justify the best and hardest effort we can put into them. We are going to try to divest our minds of all preconceived opinions and prejudices, and, first, be a sponge for collecting all the available facts about transportation from every possible source; second, put these together in a form that will be informative to anyone who wants to study them; third, possibly we can then reach conclusions and make recommendations which will be valuable.

"But we have got to go to the right sources to get the facts. That certainly means we must get a vast amount of information from both carriers and shippers. . . . We want to know from you carriers all about your operations, the cost of your services, the value of your services to the public and how they can be improved. We want to know the handicaps you encounter —those which are caused by government and those which can be cured by government, as well as those which must be left in the hands of industry for their correction—trade barriers, burdensome regulation or taxation, unfair competition and the like, inefficient and wasteful practices. We want to know how and where your particular form of transportation fits into the whole picture and we want to know its possibilities for the future and how they can be realized.

"We also want to know, as to highway transportation, what may be fairly considered the annual cost of building and maintaining roads and in what proportion these costs should be divided among the general taxpayers, land owners, and users of the highways; how much of the expense is attributable to passenger transportation, freight transportation, heavy and light weights, high and low speeds. Should carriers for hire or other commercial users pay something extra for their use of the highways? Should expense be apportioned according to their ability to pay, as well as the amount of physical wear and tear? What are fair and equitable regulations as to sizes, weights, capacity, hours, and conditions of use? What taxes or tolls are reasonable and practicable? We have all heard much argument about these questions. Are the users of the highways able to reach any substantial agreement on the proper answers?

"We want more than these. We want your views and your best judgment on the broad question of how to develop a national transportation system which will best serve our national welfare. . . ."

Woodruff Elected President of Erie

Robert E. Woodruff, 57, co-trustee and chief executive officer of the Erie, was elected president and a director of the newly re-organized company on October 22. Eight other new directors were elected and six board members were re-elected. Mr. Woodruff started with the Erie 36 years ago as a track laborer and is the first Erie president whose entire career has been with that road.

Charges for Upper Berths in East

The Interstate Commerce Commission has granted a petition of the Pullman Company for an extension from November 1 until November 1, 1942, of the expiration date of fourth-section orders granting relief in connection with the maintenance of reduced rates for the occupancy of upper berths in the East.

Suspect in City of San Francisco Wreck Held

A 73-year old transient, registered as Joe Farr, was taken into custody at Findlay, Ohio, on October 18, as a suspect in the unsolved wrecking of the City of San Francisco near Harney, Nev., on August 12, 1939. The fingerprints of this man have been reported as being identical with those found on a crowbar at the scene of the wreck.

Wheeler & Truman Lambaste A. A. R.

Say it is dominated by few big roads—Also hit legislative activities as not candid

The railroads have failed to achieve the stated objectives of the Association of American Railroads because that organization is "dominated by a few powerful roads which are only working for their own interests and not the interests of the railroads as a whole." Such is the conclusion reached in part 2 of report No. 26 of the Senate interstate commerce subcommittee investigating railroad finance and holding companies which was filed in the Senate on October 16 by Chairman Wheeler on behalf of himself and Senator Truman, Democrat of Missouri.

The report, which is entitled, "Some Educational, Legislative and Self-Regulatory Activities of the United States Railroads," describes in considerable detail various attempts of the carriers to influence public opinion in the schools, courts, legislatures, and in the Congress. It consists largely of testimony adduced at various hearings of Senator Wheeler's committee and set up in narrative form.

Turning to the subject of the A. A. R., the report's conclusion asserts that the railroads entered the field of self-regulation in the depth of the depression to "save the industry from complete collapse." The federal coordinator, it continues, proposed, and the railroads accepted his proposal, that the carriers, by a concerted effort through a central organization of their own, solve the more pressing problems which faced them.

However, in the opinion of the report, the railroads have failed to achieve the stated objectives of the association which they set up for this purpose. The plan to absorb over a hundred railroad organizations into one all-powerful association finally resulted in amalgamating only eight, it is declared. Senators Wheeler and Truman go on to say that the coordination of railroad facilities which was expected to save the carriers millions of dollars annually was completed in only 24 cases out of more than 500 during a period of three years, and these projects were so small that there was little resultant saving to the railroads.

Moreover, it is their belief that machinery for self-regulation has proved of little avail in the vital fields of freight-rate divisions, private-car rates, and Pullman Company contracts. They go on to cite

testimony before their subcommittee to the effect that "not only has nothing been achieved, but that it is futile to expect any results from this railroad association because it is dominated by a few powerful roads which are only working for their own interest and not the interests of the railroads as a whole."

Before starting out to cite various instances where the railroads are alleged to have tried to influence the public, the authors of the report declare that the railroads, in common with other industries, institutions, associations, and organizations, have the right to present their point of view to the public. But, they continue, the public has an equal right to know the source of facts and information presented to them, and some railroads have made a practice of disguising their educational activities.

Typical of the instances cited of alleged misrepresentation on the part of the carriers is one in which the committee charges that a transportation study, financed by a large railroad system and widely distributed in public schools, made no mention of the fact that railroad funds were behind it. Mention is also made of the Fuel - Power - Transportation Educational Foundation which was set up by railroads serving Ohio to disseminate information favorable to the carriers through the educational system of that state.

Criticism is also made by the report of efforts of various carriers to influence anti-truck legislation in certain states. The authors of the report cite as especially reprehensible the alleged payment by the railroads of salaries of men who urged on cities and states the passage and enforcement of more stringent truck legislation, while posing as representing interests having no connection with the railroads.

The charge is also made in the report that in their efforts to influence legislation in the Congress, the railroads have not only openly tried to secure or defeat the passage of certain legislation but have also tried to get certain congressmen appointed to particular committees so that they might block bills thought inimical to the carriers' interests and promote legislation beneficial to the railroads.

"The railroad industry as a public utility serving a public interest," concludes the report, "has a responsibility to inform the public of its activities, to promote legislation for the general good, and to contribute to a solution of the industry's problems. But this report indicates that the railroads and railroad associations have often resorted to indirection in offering information to the public; that railroads and railroad associations have not always been open, frank, and above board in presenting legislation to Congress; and that railroads and railroad associations have often been more concerned with the selfish interests of a few rather than the needs of the industry as a whole."

Hearing on 40 Cent Truck Minimum Wage December 1

A public hearing on a 40-cents-per-hour minimum-wage recommendation of the Property Motor Carrier Industry Committee will be held December 1 at the Mayflower Hotel, Washington, D. C. General Philip B. Fleming, administrator of the Wage and Hour Division, U. S. Department of Labor, has announced Major Robert N. Campbell of the Department of Labor will preside.

Train Dispatchers to Demand Increase in Wages

General chairmen of the American Train Dispatchers Association will serve demands upon the railroads within a few days for a six-hour day and a 46-hour week for "trick" dispatchers; an eight-hour day and a 40-hour week for assistant, night and chief dispatchers; time and one-half for overtime; and increased wages. The wage demands will include $75 a week for "trick" dispatchers, $85 for assistant and night dispatchers and $95 for chief dispatchers.

Annual Meeting of American Railway Development Assn.

The American Railway Development Association will hold its annual meeting in Chicago on October 27, 28 and 29. At the official luncheon meeting at 12:15 p. m., on Wednesday, October 29, which will be held in conjunction with the Traffic Club of Chicago in the Palmer House Club building, Col. Donald Armstrong, Executive Officer, Chicago Ordnance District, will speak on "The Re-Armament Program." The association invites any transportation people who may be interested to attend.

Representation of Employees

Certifying results of a recent election on the Peoria & Pekin Union, the National Mediation Board has found that locomotive engineers employed by that road desire no change in the present set-up wherein they are represented by the Brotherhood of Locomotive Engineers. The B. of L. E. got 16 votes while 14 were cast for the Brotherhood of Locomotive Firemen & Enginemen.

In another case involving motormen employed by the Chicago, South Shore & South Bend, the B. of L. F. & E. beat out the B. of L. E. by 22 to 18 and thus maintained its present position as the certified representative of the motormen.

Railroads to Continue Low Fares for Men on Furlough

Railroads have agreed to continue until October 31, 1942, the special fare of 1¼ cents per mile for the uniformed personnel of the Army, Navy, Marine Corps and Coast Guard when traveling on furlough in uniform at their own expense, J. J. Pelley, president of the Association of American Railroads, announced on October 22. This arrangement also applies to cadets, midshipmen and nurses of the various branches of the service.

Effective on October 31, this year, arrangements have been completed whereby this fare will be extended to military forces of the British Empire traveling within the United States in uniform at their own expense when on official leave, furlough, or pass.

The special fare is good, under a 30-day limit, for round-trip travel in coaches between all points in the United States. Special fare tickets may be purchased upon presentation of an official furlough-fare certificate which can be obtained from commanding officers at all military establishments. This plan of allowing the uniformed forces traveling on furlough a special railroad fare was established on May 1, 1941. It was to have expired at the end of this month.

Tank Car Movements of Oil Increase

Tank car movements of petroleum and its products into the east coast area, involving the combined use of pipelines, barges, and rails, moved upward for the week ending October 11, according to an announcement this week by Petroleum Coordinator Harold L. Ickes.

During the week 4,322 cars of oil were shipped into District No. 1 from outside the area. This represents an average of 617 cars shipped daily. These figures compare with a total of 4,099 cars for the previous week, or a daily average of 585 cars.

A. A. R. Cancels Open Meeting

The second annual open meeting of the Association of American Railroads, which had been planned for Chicago on November 12 and 13, has been canceled, it was announced this week. It was explained that the pressure of business during November is expected to be such that it would be difficult for railroad executive to find time for attendance at the sessions.

Meanwhile it is expected that sometime after Thanksgiving there will be a business meeting of member roads like those held in years prior to 1940 when the first open meeting was held in New York.

Advisory Board Requests Prior Attention for Car Materials

At the sixtieth regular meeting of the Northwest Shippers Advisory Board at the Hotel Alonzo Ward, Aberdeen, S. D., on October 21, a resolution addressed to Donald M. Nelson, executive director of the Supply Priorities and Allocations Board, was adopted requesting that preferential attention be given railroad requests for material and supplies for the locomotive and car construction program. The meeting also unanimously adopted a resolution supporting the National Association of Shippers Advisory Boards in their policy of promoting co-operation to obtain the most efficient utilization of equipment during the present emergency.

Standard Time in Georgia

The Interstate Commerce Commission, Division 2, has modified its previous standard-time orders so as to include the entire state of Georgia in the Eastern Standard Time Zone, but it has refused to include additional portions of Kentucky and Tennessee.

The proceeding arose as a result of Georgia's action of March 21, 1941, adopting Eastern Standard Time for the entire state. The report, by Commissioner Aitchison, pointed out that the change will make necessary "numerous operating exceptions"; but in that connection counsel for interested railroads "interposed no

substantial objection from an operating standpoint."

Freight Car Loading

Loadings of revenue freight for the week ended October 18 totaled 922,884 cars. The Association of American Railroads announced on October 23. This was an increase of 19,007 cars, or 2.1 per cent, above the preceding week, an increase of 108,975 cars, or 13.4 per cent, above the corresponding week last year and an increase of 66,595 cars, or 7.8 per cent, above the comparable 1939 week.

As reported in last week's issue, loadings of revenue freight for the week ended October 11, totaled 903,877 cars, and the summary for that week, compiled by the Car Service Division, A. A. R., follows:

Revenue Freight Car Loading

For Week Ended Saturday, October 11			
Districts	1941	1940	1939
Eastern	184,753	162,245	170,763
Allegheny	192,787	166,267	171,714
Pocahontas	60,240	47,157	58,301
Southern	127,262	111,432	116,714
Northwestern ..	141,089	142,210	134,142
Central Western	137,200	125,862	130,716
Southwestern ..	60,546	56,733	57,602
Total Western Districts	338,835	324,805	322,460
Total All Roads.	903,877	811,906	839,952
Commodities			
Grain and grain products	36,553	37,274	38,793
Live stock	20,226	21,709	21,391
Coal	171,694	120,310	165,542
Coke	13,159	11,581	11,585
Forest products.	44,832	41,097	38,432
Ore	64,096	70,362	66,059
Merchandise l.c.l.	160,718	160,661	160,683
Miscellaneous ..	392,599	348,912	337,467
October 11	903,877	811,906	839,952
October 4	917,516	806,004	830,102
September 27 ..	919,510	822,434	829,696
September 20 ..	907,969	813,329	809,752
September 13 ..	913,952	804,265	800,431
Cumulative Total, 41 Weeks ...	33,084,877	28,207,950	25,955,998

In Canada.—Carloadings for the week ended October 11 totaled 68,043, as compared with 68,033 for the previous week and 64,532 for the corresponding week last year, according to the summary of the Dominion Bureau of Statistics.

	Total Cars Loaded	Total Cars Rec'd from Connections
Total for Canada:		
Oct. 11, 1941	68,043	30,865
Oct. 4, 1941	68,033	32,191
Sept. 27, 1941	68,662	31,433
Oct. 12, 1940	64,532	25,003
Cumulative Totals for Canada:		
Oct. 11, 1941	2,472,173	1,208,355
Oct. 12, 1940	2,173,380	1,001,002
Oct. 15, 1939	1,959,651	858,157

Randall Sees N. Y. Handling 85 P. C. World War Traffic Peak

During September the volume of railroad freight delivered to boats in New York harbor was 84.8 per cent of that handled in October, 1918, the peak of World War traffic. This business was handled last month without congestion or delay, according to G. C. Randall, manager port traffic, Association of American Railroads, in a talk before the Foreign Commerce Club of New York in that city on October 15. The average freight delivered to boats was 1146 carloads each working day in September, 1941, as compared with 1350 loads in October, 1918.

The average unloading of export and coastal freight at New York has increased from an average of less than 500 cars per day in the early months of 1939 to more than 1175 cars per day the week of October 5. "We have approximately 6,000 cars of freight on wheels at New York this morning which can readily be seen to be about 5 days' supply. There are also approximately 6,900 cars of freight in covered pier and ground storage available for lighterage at any time, but even so, we have storage space available for approximately 15,000 cars additional. In other words, by any measuring stick the situation at the port of New York is 'liquid.'"

Conscience Hurts Him—Returns $595 to Santa Fe

Five hundred and ninety-five dollars was enclosed in a letter recently received at the Santa Fe offices in Galveston, Tex. Attached to the money was an unsigned note which read: "Enclosed find $595 for which I was not due. It was received years ago. As my life has changed I want to clear all things up." The money, consisting of four 100 dollar bills, three fifties, one twenty, two tens and one five, will be turned over to the Santa Fe's "Conscience fund." Hundreds of dollars have been contributed to this fund over the years by conscience-stricken persons all, of whom, it is said, have remained anonymous.

Claims Conferences to Meet October 30 and 31

The Eastern and Chicago Claim Conferences will hold their annual joint meeting at the Hotel Statler, Buffalo, N. Y., on October 30 and 31. The two conferences will convene separately on October 30, followed by a joint luncheon and joint meeting of the Uniformity committees. On the second day the conferences will meet together in a loss and damage prevention demonstration and a luncheon. At the latter, A. E. Pasman, chairman, and C. H. Dietrich, executive vice-chairman, Freight Claim Division, Association of American Railroads, and J. J. Brinkworth, assistant general manager, New York Central, will discuss briefly the accomplishments of the railroads in the present emergency.

Rogers Seeks Shipper Aid to Avert Truck-Transportation Shortage

A warning that the country is facing a possible truck transportation shortage due to rapidly increasing demands for service and an appeal to shippers for cooperation was made October 23 by Interstate Commerce Commissioner John L. Rogers, chairman of the Central Motor Transportation Committee, in a report to Ralph Budd, defense transportation commissioner.

"It is vital," Mr. Rogers said, "not only in the interest of prompt movement of national defense material, but also to insure a steady flow of civilian merchandise, that shippers and receivers of motor truck freight give careful thought and attention to ways and means of obtaining maximum use of existing motor trucks." To do this, Mr. Rogers recommended that shippers and receivers increase their loading and receiving facilities, if necessary to speed the loading and unloading of shipments; cooperate with trucking concerns in scheduling shipments so that loading docks will not be congested; and stop the practice of using trucks for storage purposes.

The Central Motor Transportation Committee, composed of representatives of the public and bus and truck operators, was appointed by Mr. Budd to formulate and execute plans to insure an adequate supply of commercial vehicles, to conserve the present supply and to provide for their efficient use. Reporting that there are strong indications in certain sections of the country truck facilities are faced with such rapidly growing demands that soon these demands may go beyond the capacity of motor carriers to handle, Mr. Rogers said: "All users of motor truck service are earnestly requested to join the motor truck operators in a great cooperative drive to —'Keep 'Em Rolling!'"

Rivers Bill Still Grows

Among projects recently approved for inclusion in the record rivers and harbors bill now being framed by the House committee on rivers and harbors is the 35-mile segment of the proposed Beaver-Mohoning Canal between Rochester, Pa., and Struthers, Ohio. The army engineers estimated that the project would cost the federal government $48,169,000 while non-federal expenditures of about $3,900,000 would also be involved.

Another project added last week is a $14,000,000 improvement of the Trinity river in Texas. As noted in previous issues, the bill, which is now nearly a billion dollar measure on the basis of army-engineer estimates, includes such projects as the St. Lawrence Seaway and the Florida Ship Canal. The committee expected to report the bill to the House next week.

Three Railroads Fined for Violation of the Elkins Act

On October 17 the Alton; the Chicago, Burlington & Quincy and the Missouri Pacific pleaded guilty and were fined $5,000, $3,000 and $4,000 respectively for violations of the Elkins Act by Federal Judge Michael L. Igoe of Chicago. The violations consisted of allowing certain commission men in the Chicago Produce market long term credits, permitting them to sell the produce and pay the railroads from the profits, an advantage their competitors in the produce business did not have. It was explained that the roads engaged in the practice only because of heavy competitive pressure and were glad the case was brought into federal court in order to put a stop to the practice. Similar cases against the Illinois Central, the Wabash and several groups of shippers were continued until November 7.

September Operating Revenues 27.3 Per Cent Above 1940

Preliminary reports from 88 Class I railroads, representing 81.5 per cent of total operating revenues, made public recently by the Association of American Railroads, show that those roads, in September, had estimated operating revenues amounting to $396,976,910, compared with $311,835,231 in the same month of 1940 and $381,524,594 in the same month of 1930. The September gross was 27.3 per cent above that for Sep-

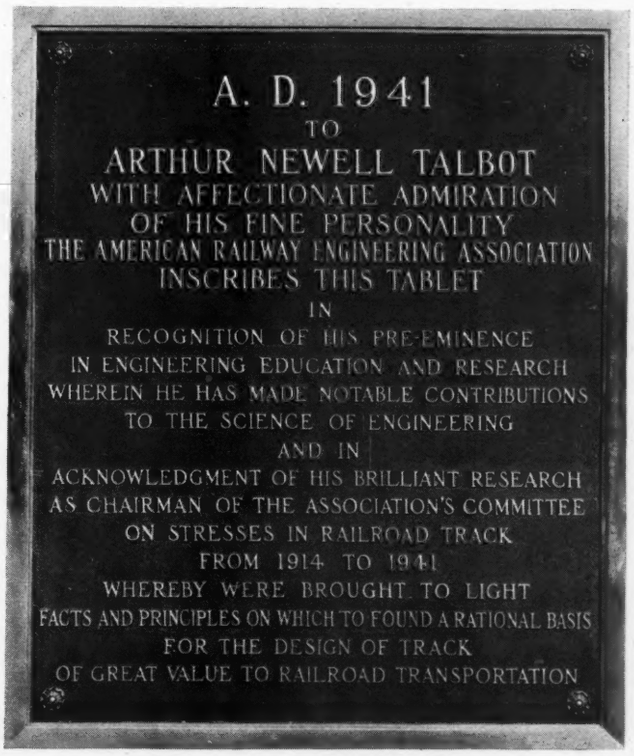
tember, 1940, and 4.1 above September, 1930.

Freight revenues of the 88 roads in September, amounted to $333,157,318 compared with $256,128,465 in September, 1940, and $297,290,777 in September, 1930—30.1 per cent above the former, and 12.1 per cent above the same month in 1930. Passenger revenues totaled $36,887,677 compared with $30,330,339 in September, 1940, and $50,202,646 in September, 1930—21.6 per cent above the former, but 26.5 per cent below the same month in 1930.

A. R. E. A. Honors Dr. Talbot

In recognition of his 27 years of outstanding research for the railways, as chairman of the Committee on Stresses in Track of the American Railway Engineering Association, more than 100 members of that organization joined in honoring Dr. A. N. Talbot, professor emeritus of municipal and sanitary engineering, on October 21, by presenting to the University of Illinois a bronze tablet for erection in the materials testing laboratory bearing his name. The occasion, which marked Doctor Talbot's retirement as chairman ot the Committee on Stresses in Track, was made more delightful by the fact that it was also his eighty-fourth birthday.

The ceremony, which was preceded by a luncheon in the new Illini Union building, and was attended also by members of the faculty, representatives of the American Society of Civil Engineers and prominent railway officers, was held at the University of Illinois, Urbana, Ill. Tribute was paid to Doctor Talbot as a man and a scientist, by H. R. Safford, executive assistant, Missouri Pacific. This was followed by the presentation of the tablet by F. L. C. Bond, vice-president and general manager, Central region, Canadian National, and president of the American Railway Engineering Association. It was accepted on behalf of the University by Dean Melvin L. Enger, of the college of engineering, after which Doctor Talbot responded, reviewing the work of the Committee on Stresses in Track and the significance of the information gathered through 27 years of research, which was launched on an uncharted course in 1914.


A. D. 1941
TO
ARTHUR NEWELL TALBOT
WITH AFFECTIONATE ADMIRATION
OF HIS FINE PERSONALITY
THE AMERICAN RAILWAY ENGINEERING ASSOCIATION
INSCRIBES THIS TABLET
IN
RECOGNITION OF HIS PRE-EMINENCE
IN ENGINEERING EDUCATION AND RESEARCH
WHEREIN HE HAS MADE NOTABLE CONTRIBUTIONS
TO THE SCIENCE OF ENGINEERING
AND IN
ACKNOWLEDGMENT OF HIS BRILLIANT RESEARCH
AS CHAIRMAN OF THE ASSOCIATION'S COMMITTEE
ON STRESSES IN RAILROAD TRACK
FROM 1914 TO 1941
WHEREBY WERE BROUGHT TO LIGHT
FACTS AND PRINCIPLES ON WHICH TO FOUND A RATIONAL BASIS
FOR THE DESIGN OF TRACK
OF GREAT VALUE TO RAILROAD TRANSPORTATION

Tablet Commemorating Dr. Talbot's Twenty-Seven Years of Research on Stresses in Track

Regulation of Forwarders

House action on S. 210, the Senate-approved bill for the regulation of freight forwarders, was expected to come the latter part of this week after Chairman Lea of the House committee on interstate and foreign commerce on Tuesday obtained a unanimous-consent agreement which paved the way for taking up the bill on Thursday in accordance with the program previously announced by Majority Leader McCormack.

As noted in the *Railway Age* of August 23, page 322, the House committee's version of this proposed new Part IV to the Interstate Commerce Act retained the S. 210 number of the Senate-approved Wheeler-Reed bill, but amended that measure by striking it all out and inserted a complete substitute. Thus if the House should act favorably the bill would still have to go to conference before Congressional action is completed.

2 Million Members of Armed Forces Traveled by Rail in 9 Months

Railroads of the United States in the first nine months this year moved 2,027,857 members of the armed forces of the nation, according to the Military Transportation Section of the Association of American Railroads. Of this number 1,235,265 were handled on 4,112 special trains; the remaining 792,592 were moved in groups on regular trains.

In September, 170,308 members of the military service were moved by railroads. Of that number 109,475 were handled on special trains and 60,833 traveled on regular trains. Among those transported in September were 37,118 selectees. Preliminary reports indicate that the number of selectees to be transported in October will approximate 88,880.

These figures as to the number of members of the armed forces transported by the railroads both in the first nine months this year and in the month of September do not include soldiers, sailors, marines, selectees or members of the Civilian Conservation Corps who traveled while on furlough.

Rules for Multiple-Car Shipments in West

The Interstate Commerce Commission has denied railroad petitions for reopening, rehearing and reconsideration of proceedings wherein the commission earlier this year disapproved various proposals whereby Western roads undertook to meet the requirements of findings in the Freight Forwarding Investigation. The commission's decision was reviewed in the *Railway Age* of July 26, page 168, the proceedings involved including I. & S. No. 4668, Loading of Multiple Cars in West; I. & S. No. 4678, Cars Furnished at Variance with Shippers' Order; and No. 27365, Freight Forwarding Investigation.

Meanwhile, in another related case (I. & S. No. 4664, Handling Carload Shipments in West), the commission has issued a report on reconsideration, amending the former report so as to permit the continuance, temporarily, of present two-car-shipment rules for application to electric stoves. The previous report authorizes like exceptions with respect to sheet iron culverts and electric water heaters.

Exhibit Trains Will Promote Spread of Defense Contracts

Three special exhibit trains—painted red, white and blue—will leave Washington, D. C., on November 10 on tours designed to promote a wider distribution of defense contracts and an extension of subcontracting on defense work. Each train will consist of six cars equipped with defense "samples" and conference tables, and two cars providing living quarters; on them will be representatives of the Army, Navy, Maritime Commission, and Office of Production Management who will undertake "to make sure that no qualified manufacturer—no matter where he is—misses an opportunity to get a defense contract for lack of information."

The plan was announced on October 21 by Floyd B. Odlum, director of OPM's Contract Distribution Division, the announcement giving detailed itineraries showing that one train will travel the Eastern seaboard while the second swings through the Middle West and the third goes to the West coast and returns via the South. Defense officials aboard the trains will endeavor to determine what type of defense equipment manufacturers are

capable of producing and guide those with suitable equipment either to defense contractors who have work to let under subcontracts or to the proper government procurement offices. Manufacturers may obtain admission to the trains by writing to the nearest field office of the Contract Distribution Division. The announcement says that the volume of work to be carried on in the trains will make it impossible to admit the public.

Judge Says Rock Island Should Be Run by Western Men

During the hearings on the Interstate Commerce Commission plan of reorganization for the Chicago, Rock Island & Pacific at Chicago on October 16, Federal Judge Michael L. Igoe, asserted "this railroad will not be run from New York by New York bankers." He declared that the new management as a reorganized property will have to convince him that it will work for the good of the road to win his approval and added "the line should be run by Chicago or at least by western men." Judge Igoe, in various railroad proceedings coming under his jurisdiction, has criticized New York banker managemen of western roads on several occasions and has held that absentee control has been a principal reason for the troubles of many western roads.

The judge's comment was made as the result of a complaint by Herbert J. Campbell, representing a group of minority bondholders with $14,000,000 of bonds, that minority interests would not have representation on the board of managers in charge of the road during the final phases of reorganization and that this board would be dominated by the larger interests.

A. N. Williams Addresses Western Railway Club

In an address at the first Fall meeting of the Western Railway Club at the Hotel Sherman, Chicago, on Monday evening, October 20, A. N. Williams, recently elected president of the Western Union Telegraph Company and former president of the Lehigh Valley, also a past president of the Western Railway Club, traced the development and growth of the telegraph business in its close association with the railroads until, today, of Western Union's 210,000 miles of pole line, about 205,000 miles are on railroad rights of way, and of 19,000 telegraph offices, about 16,000 are in railroad stations. Mr. Williams explained how these facilities, of vital importance in carrying the messages of the public, have also been equally important to the railroads in transmitting messages and signals essential to train operation. He said that never in the history of railroads or the telegraph has either one been faced with a more difficult task than confronts it today and that both industries, although now working near peak capacity must exert still greater efforts if they are to meet successfully the demands placed upon them by the defense program.

Referring to the vital character of telegraphic communications, Mr. Williams said that last year the Western Union carried about 157,000,000 messages, or five every second, and that the messages carried this year may be twice that number and perhaps even more in 1942. In closing his remarks, Mr. Williams said that by its network of lines across the country and its network of cables outside the borders of the country, Western Union is prepared to give the United States a swift, efficient and complete communication system whether in time of war or in time of peace.

Following the formal address, a moving picture was shown which gave a vivid impression of the problems involved in laying a transoceanic cable for several thousand miles over the mountains and canyons which comprise the floor of the sea. It was explained that the first successful Atlantic cable carried only 732 messages before it failed, whereas, the latest improved cables can successfully operate both ways at a speed of 1400 letters a minute each way.

On October 16 President Williams delivered an address on the activities of Western Union to the New York Railroad Club.

Club Meetings

The Transportation Club of the Rochester Chamber of Commerce will hold its next meeting at the Chamber of Commerce building, Rochester, N. Y., on October 29 at 8 p. m. A forum meeting has been scheduled and the following topics selected: The Packaging and Container Problem; Highlights of the Atlantic States Shippers Advisory Board Meeting; Motor Carrier Rate Adjustments in Litigation; and Associated Traffic Clubs Annual Meeting. Each will be presented by a speaker.

The Car Foremen's Association of Chicago will hold its next meeting on November 10 at 8 p. m. at the Hotel La Salle, Chicago. D. J. Jones, service engineer, Vapor Car Heating Company, Chicago, will present a paper entitled: "Temperature Control of Passenger Car Heating."

The New England Railroad Club will hold its next meeting on Tuesday November 18, at the Hotel Touraine, Boston, Mass., at 6:30 p. m. Kenneth Cartwright, mechanical engineer, New York, New Haven & Hartford, will present a paper entitled "Progress in Steam Locomotive Design." This meeting was originally scheduled for November 12.

The Canadian Railway Club will hold its next meeting at the Windsor hotel, Montreal, Que., on November 10 at 8:15 p. m. J. A. M. Galilee, Westinghouse Air Brake Company, will present an illustrated talk on "New Tools for Research."

House Passes Emergency Roads Measure

The House of Representatives, on October 21, passed without a roll call vote H. R. 5810, the emergency roads bill which makes authorizations for the immediate construction of access roads to military and naval reservations, defense industries, and sources of raw materials. The bill was designed to meet the objections of President Roosevelt to H. R. 5110 and S. 1580, which he vetoed on August 2.

Since the Senate has already passed a substitute for the vetoed bills which authorizes an appropriation of some $195,000,000, and the House measure reduces this figure to approximately $180,000,000, the bills will have to go to conference. Details of the House measure were set out in last week's *Railway Age*. . . . . .

During the debate Representative Snyder, Democrat of Pennsylvania, spoke briefly in favor of his bill, H. R. 3461, which would authorize the construction of a net work of super highways over the entire country. In his speech he said that "most of the House members are in favor of a super highway program similar to what my bill, H. R. 3461 calls for."

Meanwhile, the American Road Builders' Association has issued a statement calling for a "carefully-planned" program of post-war road construction. "While some work on eliminating bottlenecks and widening and relocating existing highways will undoubtedly be undertaken at once as a part of national defense," declared the statement, "such present improvement must necessarily be confined to the most strategic areas and cannot be all-covering. As to the improvement of local roads, that undoubtedly must await in large part the post-war period. This work will then become a national lifesaver in cushioning a great economic emergency.

A. C. F. Increases Tank Production Four-Fold

The American Car & Foundry Co. delivered its 2,000th combat tank to the United States Army on October 21, less than three months after completing delivery of its first 1,000 tanks on August 2. In this short period the company has thus equalled its production for the preceding twelve months—a four-fold speed-up.

The company also reports receipt of an order from the United States Government for an additional 1200 12½-ton light combat tanks at cost of about $31,000,000, part of which order includes spare parts and repair parts. About 900 of these tanks will use gasoline engines and 300 will be Diesel-equipped.

In addition to delivering 2,000 out of total orders comprising over 5,800 tanks received from the United States Army, the American Car & Foundry Co. has supplied large quantities of tank suspensions and tank parts to the British. At an expenditure of $3,000,000, financed entirely by the company, it has established a completely separate Ordnance department which now occupies 560,000 sq. ft. of working space. For the armor for these tanks, and to supply the needs of other manufacturers, it has installed the largest plant in the world for the manufacture of case-carburized armor plate, producing approximately 2,000 tons of armor plate a month.

Grade Crossing Fatalities Highest in Ten Years

Fatalities resulting from accidents at highway-railroad grade crossings were greater in the first eight months of 1941—January 1, to September 1—than in any corresponding period in the past 10 years, according to the Safety Section of the Association of American Railroads.

Such fatalities totaled 1,152 compared with the previous high mark of 1,198 in

the first eight months of 1931. The total for the eight months period this year was an increase of 47 compared with the same period in 1940. Persons injured in highway-railroad grade crossing accidents in the eight months period this year totaled 2,849, an increase of 190 compared with the same period in 1940.

"With the approach of winter and the resulting increased tendency on the part of drivers to ride with all windows closed, increased precautions should be used by motorists in approaching and passing over highway-railroad grade crossings," said O. F. Gnadinger, chairman of the Committee on Prevention of Highway Crossing Accidents, of the Safety Section. "Many states require certain or all vehicles to come to a complete stop at such crossings. In the past 10 years, 16,465 persons have lost their lives in grade crossing accidents. Adequate care in passing over such crossings would have saved many, if not all, of these lives."

Pennsylvania Orders New Floating Equipment

The Pennsylvania has awarded contracts for the construction of 36 new pieces of floating equipment to augment its present fleet of 274 tugs, lighters, barges, car floats and ferries in New York Harbor. The contracts, to be completed early in 1942 at an estimated cost of $1,970,000, will include 10 steel car floats, 10 steel open-deck barges, 15 steel covered lighters, and one steel steam-driven tug boat.

In making the announcement, J. A. Appleton, general manager, stated: "In building up our working fleet, we are preparing for the increased freight traffic which is expected to pass through the Port of New York during the coming year, when our national defense effort will have begun to reach full stride. The Pennsylvania fleet, constituting one-fifth of all the railroad-owned floating eqnipment in the Port of New York, is responsible for the movement of munitions, foodstuffs and other defense materials quickly and safely from the railheads on the New Jersey side of the harbor to waiting convoy ships, to piers and freight yards serving industry, and to the railheads on Manhattan Island, Long Island, Staten Island and in the Bronx. These tugs, lighters, barges and car floats make it possible for the merchant marine of our own and foreign nations to carry vital supplies across the Atlantic from the arsenals of America."

Minimum Rates of Contract Carriers

In considering the question of whether a contract motor carrier's rates were unduly low, the Interstate Commerce Commission, Division 3, has concluded that "controlling weight" should be given to the contract carrier's operating expense "and not to the rates of competing common carriers." The decision is in No. MC-C-165, involving the complaint of the New England Motor Rate Bureau, Inc., against James A. Lewers and John M. McCauley doing business as Lewers Transportation Company.

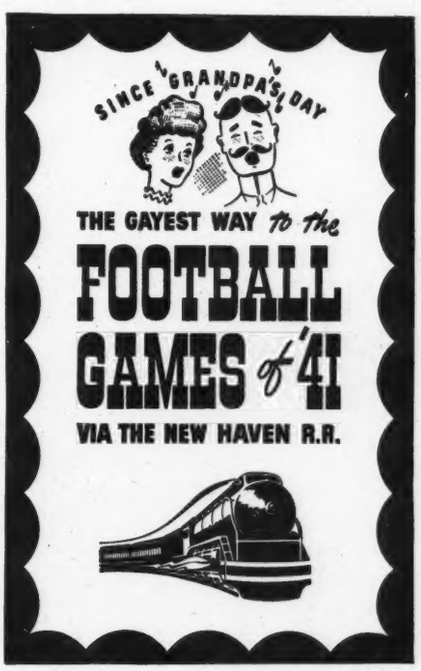
The Bureau assailed the minimum rates maintained by the defendants on sugar from Boston, Mass., to Providence, R. I., Pawtucket and Woonsocket, and on groceries, grocery store supplies, fresh fruits and vegetables, and chain store equipment from Boston to Providence and from Providence to Worcester, Mass.; and the commission does require changes in those rates and the minimums applicable in connection therewith—not, however, because they were lower than the common-carrier rates, but because they were held to be not reasonably compensatory or out of line on a mileage basis with each other.

Leading up to its aforementioned conclusion that controlling weight should be given the contract carrier's expenses, the commission examined pertinent provisions of the Motor Carrier Act and then had this to say: "The view that the minimum rates prescribed shall be made with relation to the contract carrier's operating cost is strengthened by reference to the language of section 218 of the act which makes it the duty of contract carriers to establish and observe 'reasonable' minimum rates and charges and requires us to prescribe 'just and reasonable' minimum rates or charges. Clearly a minimum rate prescribed for a contract carrier on the basis of the rate prescribed for competing common carriers would be unreasonably high if the contract carrier's cost of operation was appreciably lower than that of the common carriers."

The report noted that Commissioner Alldredge concurred in the result; thus the report is that of Commissioners Mahaffie and Johnson.

New Haven Issues Vest-Pocket Football Schedule

For the promotion of train travel to football games, the New York, New Haven & Hartford has issued a vest-pocket sized booklet containing a timetable of football games to be played in New Haven territory or in that of the connecting Pennsylvania in which New England colleges are involved. Following this there appears for each point along the line in which games are to be played a description of four types of train service; (1) day-before--games service; (2) over-night in sleeping cars; (3) over-night in coaches; and (4) Saturday mornings. The last page of the book contains fares between main points. The booklet is prepared in the style and format of "vest-pocket" timetables issued by the road earlier this year.



The Front Cover of the New Haven's New Football Booklet

S. A. L. Authorized to Give Up Air Line Operation

Receivers of the Seaboard Air Line were authorized by Federal Judge L. B. Way, at Norfolk, Va., on October 14, to complete an agreement with Ladenburg, Thalmann & Co., under which the latter will take over financing of the road's subsidiary, Seaboard Airways, Inc. Under the agreement the New York banking house will finance Airways' application for permission to start operations in territory served by the road generally in hearings scheduled before the Civil Aeronautics Board on October 27.

Receivers of the railroad will deliver to Ladenburg 785 shares of $100 par value stock of Seaboard Airways which the road now holds. Should approval be forthcoming for the new air routes, however, the railroad has the option of receiving a cash re-payment of its original $78,500 investment at 4 per cent interest or of purchasing up to 30 per cent of all voting stock of the air line and, in addition, 30 per cent of non-voting securities.

Approval for the agreement was requested of the court on October 10 by receivers of the road in answer to a demand by representatives of holders of receivers' certificates and of underlying bonds that no further disbursements be made in an effort to organize the new airway.

Testifying at a hearing on the agreement, Colonel H. W. Anderson, co-receiver of the railroad said it was "almost a calamity that the Seaboard railway had been estopped by holders of certificates and bonds from continuing the development of Seaboard Airways, Inc." He declared that the proposed airline was an excellent investment and that a franchise for operation of a line along the East coast "would be an extremely valuable possession."

U. S., Canada and Australia Asked to Supply Cars to Persia

Great Britain is understood to have requested the United States, Canada and Australia to provide some 200 locomotives and 20,000 freight cars to increase the capacity of the Trans-Iranian railway. Completed early in 1939 and operated by the Iranian State Railways, the 808-mi. line crosses the high Iranian Plateau between Bandar Shahpur, on the Persian Gulf, and Bandar Shah, on the Caspian Sea. Thus it forms the present "back-door" route for strategic materials to Russia, since boat lines connect Bandar Shah with the mouth of the Volga and other railheads in Soviet Russia.

The line is standard-gage and hence can utilize American and Canadian equipment without change. Of the Australian roads, only the equipment of the Trans-Australian line of the Commonwealth Railways

and of the New South Wales Government railways would be usable, since other systems in Australia are of gages of 3 ft. 6 in. and 5 ft. 3 in., respectively. The administration of the Iranian State Railways was known—at the beginning of the year—to be engaged in the construction of a standard gage line from Teheran, capital of the country, to Tabriz, where it would connect with the hitherto isolated Azerboyejan line. The latter extends approximately 110 mi. to meet the Soviet Caucasian railways at Julpha on the frontier. It is on the Russian gage of 5 ft. and hence no through operation would be possible over its rails from the Trans-Iranian line.

The British government is also understood to be requesting 200,000 tons of steel rail. Whether this is to be used for the addition of sidings to the Trans-Iranian line or for the completion of the connection between the standard- and Russian-gage lines has not been revealed.

Truman C. Bigham Appointed Secretary of Transport Study Board

Truman C. Bigham, professor of economics at the University of Florida, has been appointed secretary to the Board of Investigation and Research created under the Transportation Act of 1940. As the Board's October 21 announcement of the appointment said, the act provides for the designation of a secretary at an annual salary of $7,500. No action has yet been taken with respect to the $9,000-a-year position of general counsel.

Recalling previous indications of its intention to select as secretary "an outstanding transportation economist who would assume general supervision over the various research projects to be carried on in accordance with the provisions of the statute," the Board's announcement presented Dr. Bigham as "a student whose reputation in the fields of both transportation and taxation is well established." Also, it said that the University of Florida had cooperated by extending leave of absense to Dr. Bigham, thus making it possible for him to take up his new duties at once.

A native of Texas, Dr. Bigham received his A. B. degree at Baylor University in 1920 and did graduate work at the University of Chicago, where he received an M. A. in 1925, and at Stanford University, which conferred on him a Ph. D. in 1927. He has since served on the faculties of various universities, having been a member of economics departments at Indiana University, Stanford University, University of Arkansas, University of Washington, and University of Florida. He is a member of the American Economic Association and the Southern Economic Association, having been president of the latter in 1938. Also, he has been editor of the Southern Economic Journal, and has served as consultant on economic matters to the Florida Railroad Commission and the comptroller of Florida, engaging in and directing, as the Board's announcement put it, "extensive research into transportation and tax problems."

A writer on economic subjects, Dr. Bigham is co-author with Professor Elliot Jones of Stanford, of "Principles of Public Utilities." He is also author of "Taxation and Public Debt in Florida," and of "Transportation, Principles and Problems," which is now in press. In addition he has contributed to such journals as the American Economic Review, Southern Economic Journal, Journal of Land and Public Utility Economics, Public Utility Fortnightly, and Annals of the American Academy of Political and Social Science.

Atlantic Shippers Fit the Pieces Together on Car Conservation

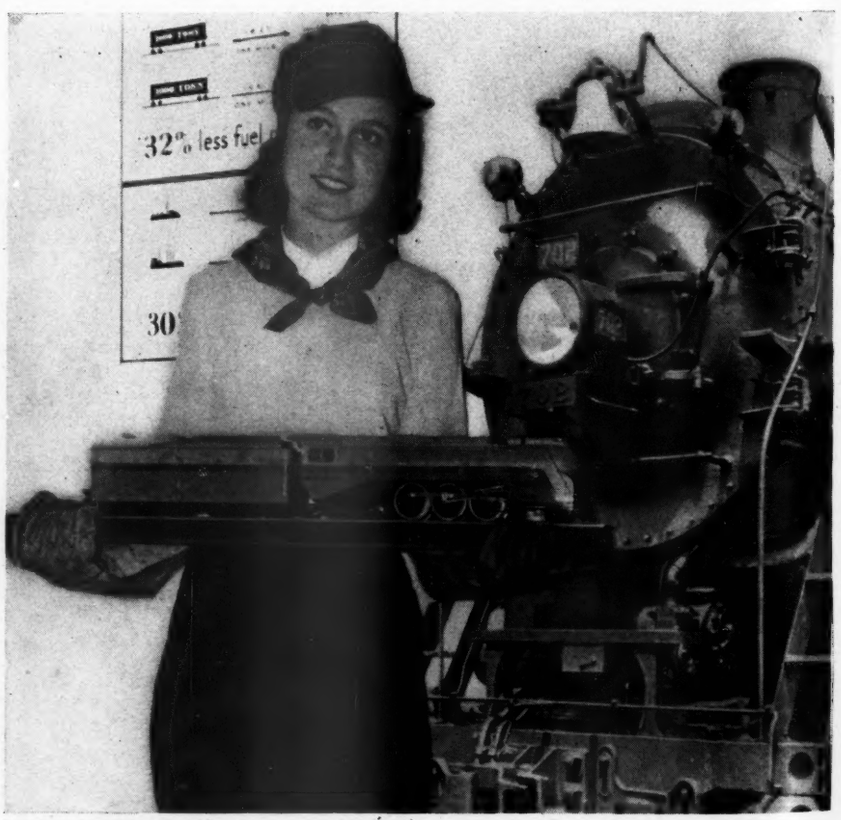
What the railroads and the shippers can do to insure an adequate car supply by heavier loadings, quicker turn-around and careful car ordering was the chief subject at a lively meeting of the Atlantic States Shippers Advisory Board in Syracuse, N. Y., on October 8. Addressing the membership at luncheon, R. W. Brown, president, Lehigh Valley, who has been chairman of the Railroad Contact committee of the board for a number of years, declared that continuance of shippers advisory boards during slack business has proven its value in the present emergency. Pointing out that certain persons in railroad and government circles believed it was a waste of time to continue the boards during the period of slim traffic, while others felt that the railroads "were already out," Mr. Brown said that members of the boards themselves nevertheless continued their activities and their interest in the railroads and "because you did, you are now prepared and ready to take over the added duties that come with an emergency such as we now have."

He stated also that early in 1939 the railroads realized the serious problem confronting them partly as a result of information furnished them by such organizations as the advisory boards. The carriers set about to build up a program for rehabilitation of, and addition to, their facilities. Among other things, the speaker declared: "We have changed our basis of ordering cars. Formerly we put in our order and after the car builder had it in his hands he could then deliver the cars or deliver the material to the shops of the railroads for construction of the cars within a period of three months. Anticipating the difficulty of getting the material we have extended that to six months. We have even gone to seven and eight months. Yet that doesn't seem to be sufficient time.

"We plan on 120,000 cars for 1942 but if the program is carried on as it is today, we will still be short and have on order 100,000 cars at the end of the year without ordering any more for next year. You know it is very difficult to co-ordinate the views of some in government circles who have expressed the thought that the railroads will be unable to handle the volume of business that would be offered to them as a result of government expenditures. Priority orders are given for the manufacture of material to be transported in railroad cars yet they withhold priority orders on the material for the construction of the cars to transport the material."

One of the most important and urgent subjects discussed at the meeting was the question of containers. On this topic, C. H. Vayo, general traffic manager, Eastman

* * *



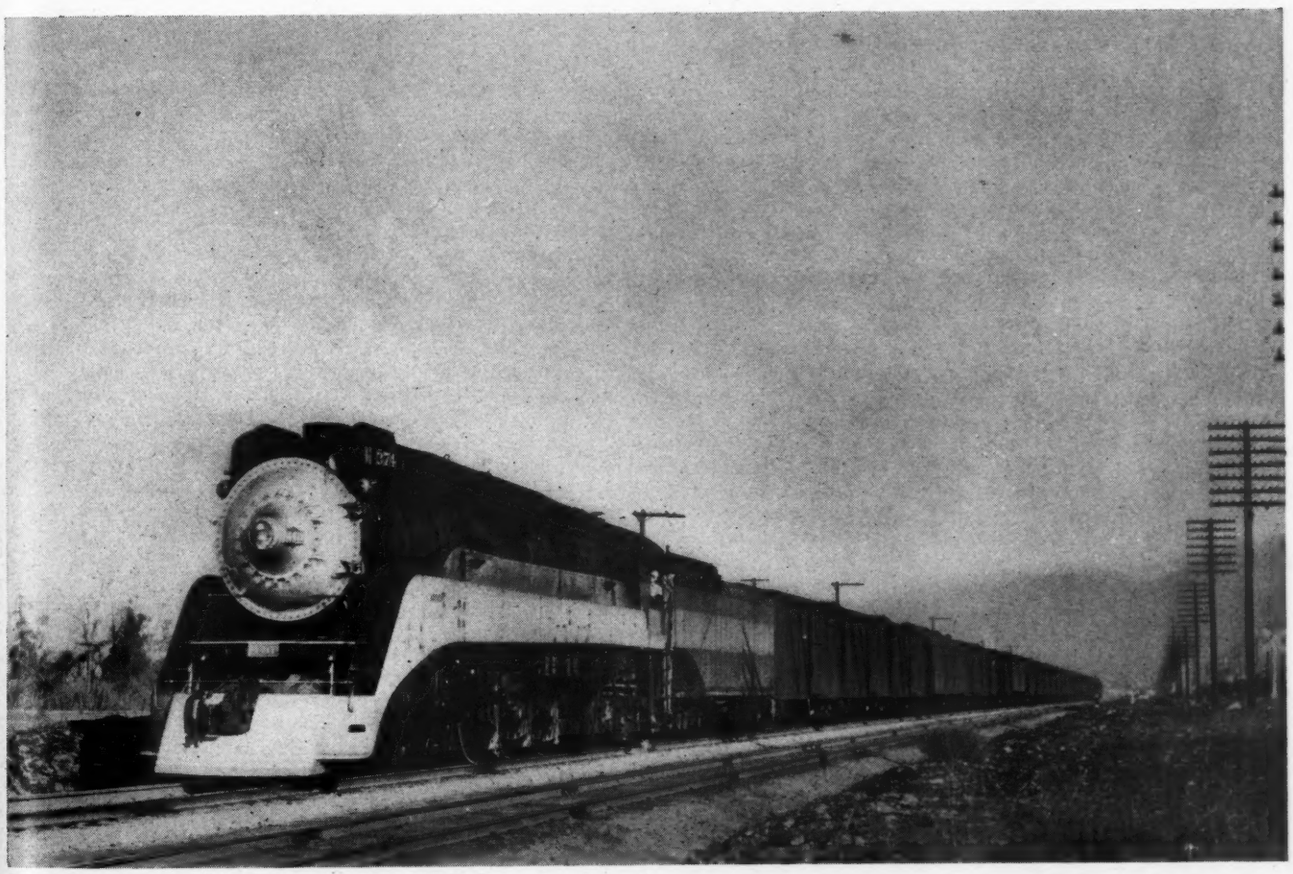
The Baldwin Locomotive Works Is Showing This Scale Model of a Locomotive Operated in High Speed Passenger Service by the Atchison, Topeka & Santa Fe at the Metal Congress in Philadelphia, Pa., Which Opened on October 20.

Continued on next left-hand page

The Secret of the "Hotshot" Is Speed

The "Hotshot Freight" has proved the possibility of winning back to rail transportation much of the freight that the railroads thought lost . . . this has been done through speed—speed that can only be realized by using high-speed locomotives of the type in service on the Southern Pacific. These Locomotives are used on both the crack "Daylight" passenger trains and on the equally fast over night "Hotshots".

Install a fleet of Lima-built high-speed locomotives on your freight and passenger runs and regain your share of 1-c-1 freight.



LIMA LOCOMOTIVE WORKS LIMA LOCOMOTIVE WORKS INCORPORATED **INCORPORATED, LIMA, OHIO**

Kodak Company, declared that a shortage exists of fiber boxes, folding cartons and wooden and wire-bound containers. He was informed by Army officers that they will use at least ⅔ of the entire production of these materials in the near future. Certain manufacturers of packing materials and containers are already failing to fill orders. Noting that a number of industries have begun to conserve used packaging, Mr. Vayo called upon the membership to give the matter consideration and plan what may be done to meet the situation. In the discussion following, the statement was made that classification specifications for containers as established by the railroads might be liberalized as to the thickness of materials and the amount of materials that must be used for packing.

Reporting on heavier loading of cars, F. E. Guy, general traffic manager, Universal Atlas Cement Company, said that the average loading per car made by his company in August and September was between eight and nine per cent higher than in the same months of 1940. This heavier loading saved approximately 800 cars per month for this shipper alone. Pointing out that "we have had to pinch here and there . . . but I really cannot say we have had any car shortage," the speaker said that this pleasant state of affairs was achieved only by the saving of cars brought about by heavier loading. His advice to other industries would be to "sell" the idea of heavier loadings first to the sales department, since salesmen often accept any size order unless they are apprised of the need of seeking heavier loadings.

In the discussion following Mr. Guy's presentation, it was pointed out that a firm shipping a great deal of l. c. l. is now using five ferry cars a day, as compared with ten several months ago. Another member said that in addition to achieving co-operation from the sales department for outbound shipments, traffic managers should try to persuade their purchasing departments to increase loadings of inbound cars. One company, for example, now orders chemicals in five 25-ton cars instead of seven 20-ton cars.

Discussing the removal of dunnage from cars, H. H. Pratt, general traffic manager, Crucible Steel Company, said that shippers react to the problem with mixed emotions. If they are under the obligation of cleaning the cars after unloading they should then be afforded clean cars by the railroad when ordered for loading. He felt there is some justification in the following position: "When we receive empty cars from the railroad in nearly all cases we have to prepare them; we have to clean them. We don't see why we should clean cars that we receive empty from the railroad and then turn around and clean the cars that we return to the railroad for somebody else to use." Mr. Pratt did, however, criticize adversely shippers who deliberately load debris into cars for free disposal by the railroad. He expressed the opinion that the railroad should levy freight charges on such material put in the car. As for the matter of dunnage unloading, Mr. Pratt thought the shipper should take out the heavy wooden dunnage and make a reasonable effort to take out the debris but he felt that it was not necessary for the shipper to sweep the car "broom-clean" before he turns it back to the railroad. He expressed the hope that the carriers will supply wooden dunnage blocks in cars.

W. C. Kendall, chairman, Car Service Division, Association of American Railroads, expressed the opinion that peak weekly carloadings this year "will be about 950,000; possibly 960,000 cars; certainly not over that amount." Following the peak weeks of October, he said, there will be a leveling off with probably a higher level the last two months of this year than is normal. Speaking on the co-operation which the railroads are receiving from shippers and receivers generally, Mr. Kendall said that individuals, firms and trade organizations throughout the country are aiding in a publicity campaign to the shipping public. The Car Service Division has learned of 43 individual uses of stickers for packages by individual firms. In addition 29 trade organizations have described how they solicit their memberships in a program of car conservation. A total of 114 different organizations are definitely known to have given such assistance to the railroads.

C. J. Fagg, manager of transportation, Newark (N. J.) Chamber of Commerce, presented a plan for the organization of local car efficiency committees, of which the first was organized under the Board in Washington, D. C. Referring to the success of the North Atlantic Emergency Port traffic committee in co-ordinating shippers, steamship lines and railroads in handling port traffic, Mr. Fagg said that similar organizations for interior points should achieve similar results. The shippers have been constantly advised as to loading freight cars properly, prompt movement, unloading, etc., but there is no plan to ensure definite response to these appeals. On the basis of the experiences of a test committee organized at Passaic, N. J., the speaker presented a plan of organization of local car efficiency committees, of which the chairman would have the duty not only of publicizing car efficiency programs, but to serve as a clearing house for local railroad representatives to report circumstances of non-compliance by shippers and receivers, and *vice versa;* and further, in the event that local action is unsuccessful, to report circumstances of non-compliance to the district manager of the Car Service division for handling. The board will hold its next meeting at Newark, N. J., on January 7 and 8, 1942.

1940 Earnings of Water Lines

The Interstate Commerce Commission's Bureau of Statistics has issued for 1940 a statement setting forth selected financial and operating statistics from the annual reports of common-carriers by water which were railroad-controlled or which participated in joint routes with railroads. In other words the data do not reflect the operations of all water carriers now under the commission's jurisdiction, no reports for 1940 having been required of those brought in September 18, 1940, by enactment of the Transportation Act of 1940.

Ninety carriers were required to file the 1940 reports, as compared with 93 in the previous year. On the basis of data restricted to companies which filed a full year's report in both years, the aggregate 1940 gross revenues were $111,411,408, an increase of $5,255,731 over 1939; and the net income was $2,125,509, up $714,222. The breakdown of the figures by groups shows that the foregoing is the result of net incomes earned by carriers in the Pacific Coast and Mississippi River and Tributaries groups which offset deficits reported by the Atlantic and Gulf Coasts and Great Lakes groups. The Pacific Coast group realized a 1940 net income of $2,860,602 from gross revenues of $25,435,347, whereas the Atlantic and Gulf Coasts group, with a gross of $59,530,690, lost $841,637. The Mississippi River and Tributaries group had gross revenues of $12,749,290 and net income of $491,633, while the Great Lakes group had a gross of $13,696,081 and a deficit of $385,089.

The Federal Barge Lines, operated by the government-owned Inland Waterways Corporation, reported a 1940 gross of $7,068,224 and a deficit of $293,910 (the deficit at the "operating income" stage was $435,119). The next largest carrier in the Mississippi group—American Barge Line Company—had a 1940 net income of $618,085 from a gross of $3,235,265. Moreover, it had water-line tax accruals totaling $247,175, whereas the Federal Barge Lines had none

I. C. C. Still Claims Only Narrow Labor-Act Powers

Reporting after reargument of the case involving the status of foremen, assistant foremen and laborers of a contractor on the ore docks of the Northern Pacific at Superior, Wisc., the Interstate Commerce Commission has further determined the extent of its jurisdiction under the Railway Labor Act. The report is thus a follow-through from the recently-decided Hudson & Manhattan elevator operators case (see *Railway Age* of May 24, page 955) wherein the commission construed for the first time its authority and duties under the Labor Act, assuming for itself a relatively restricted role.

Adhering to the rule of the H. & M. decision, the commission again restricts itself to amending and interpreting existing orders defining work as that of an employee or subordinate official of a carrier; but it does amend those existing orders to include the work performed by the ore-dock foremen, assistant foremen and laborers. In the prior report Division 3 had found that work defined in the existing orders did not include that of the ore-dock employees; and the commission affirms that finding as correct, adding, however, that Division 3's findings "do not dispose of the prayer that the 'existing orders' be amended. . . ."

In acting favorably with respect to that prayer of the Brotherhood of Railway Clerks, the commission recalled how the N. P. had operated the ore dock with its own employees prior to 1928 when it entered a contract with Addison Miller, Incorporated; that "the Northern Pacific has consistently continued to hold itself out to the public as performing the service"; and that "the work of the dock employees is

Continued on next left-hand page

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SMALLER LOCOMOTIVES with the same power

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THE SAME SIZE LOCOMOTIVES with even greater power

Because of the striking increases in train load-speed capacity achieved by the application of The Franklin System of Steam Distribution, the railroads are forming an entirely new concept of locomotive design. The steam locomotive of tomorrow will be a much more compact and efficient unit. For passenger service, where speed is paramount, it is now possible to build locomotives of smaller size that will have the necessary power to handle the present loads. For service where speed and capacity are the governing factors, it is now possible to build locomotives with the same overall dimensions yet 33% larger in train load-speed capacity.

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directly and inseparably connected with the actual transportation of the ore."

In its other aspects, the report hewed to the narrow-jurisdiction line, finding that the commission has no jurisdiction to determine whether the N. P. or Addison Miller is the employer within the meaning of the Railway Labor Act of the ore dock employees; and that it is likewise without jurisdiction to determine whether Addison Miller is a carrier within the meaning of the first paragraph of Section 1 of the Railway Labor Act.

Chairman Eastman, concurring in part, thought the commission had rightly disclaimed authority to determine the status of Addison Miller under the Railway Labor Act; but he nevertheless believed that it has jurisdiction and a duty to determine whether the contractor is a carrier by railroad subject to the Interstate Commerce Act. Expressing his individual view, the chairman stated that Addison Miller is not a carrier; because the N. P. "in all essential respects retains dominant control over the time and manner in which the work is performed, and the men engaged in the work are subject, in practical effect, to its continuing authority to supervise and direct the manner of rendition of their services."

Commissioner Patterson, who dissented in the H. & M. case, here filed a dissenting-in-part opinion to which Commissioners Miller and Rogers subscribed. He pointed out that Section 1 (5) of the Railway Labor Act provides three tests by which to identify employees who are subject to its provisions: (1) The employee must be in the service of a carrier; (2) the carrier must have continuing authority to supervise the service of the employee; (3) the work performed must be defined by the I. C. C. as that of an employee or subordinate official. Mr. Patterson was unable to agree with the majority view that the commission has authority to make a determination only as to the third of the foregoing.

Authority specifically granted to make that determination, he said, "of necessity authorizes this commission to make determinations as to (1) and (2), for unless we affirmatively find that the worker is in the service of a carrier and subject to that carrier's supervision we have no power to make a determination as to whether the worker is an employee or subordinate official." Moreover, Mr. Patterson added: "From the passage of the Railway Labor Act in 1926 until recent months the commission consistently so construed the act. . . . The act has been twice amended by the Congress with full knowledge of our assertion of jurisdiction to make such findings, yet no change has been made in Section 1 (5). Notwithstanding all this, the majority at this late date disclaim jurisdiction." Commissioner Splawn did not participate in the disposition of the proceeding.

Drastic Order on Copper

The Division of Priorities, Office of Production Management, has imposed additional rigid controls on copper and brass, issuing Conservation Order M-9-c which virtually forbids the use of copper for many civilian products. The OPM announcement, made October 21, calls the order "the most far-reaching action of its kind yet taken."

The order sets up these controls over both domestic and imported metal and scrap: (1) Use of copper in more than a hundred civilian articles is restricted to approximately 60 per cent of a 1940 base period until January 1, 1942; (2) use of copper in the manufacture of the articles listed is prohibited after January 1, 1942, except for non-decorative plating; (3) use of copper in building construction is prohibited after November 1, 1941; (4) use of copper in all items not listed is reduced to 70 per cent of a 1940 base period.

The prohibited list includes seven general categories: Building supplies and hardware; house furnishings and equipment; dress accessories; jewelry, gifts and novelties; burial equipment; automotive, trailer and tractor equipment, and a miscellaneous list which runs from fire-fighting apparatus to toys. Seven exceptions are made. Restrictions do not apply to Army, Navy, lend-lease or other government defense agency contracts where the use of copper is specified; to products covered by underwriter or other safety regulations in effect on October 1, 1941; to copper used as a conductor of electricity; in chemical plants where corrosive action makes other materials impractical; in research laboratories; for condenser or heating exchanger tubes and tube sheets in steam generating plants and oil refineries where corrosive action invalidates the use of other materials, and in hydro-electric plants.

Reasons for the order, the announcement said, "are readily apparent in supply and demand figures for October, 1941." Army, Navy, lend-lease and other primary defense agency demands for the month total 144,430 short tons. Total demand, including civilian, is 259,479 tons. Total production for the month, domestic, foreign and scrap, is 138,700 tons. And "estimates for 1942 show a continuing serious situation."

Supply Men Exhibit at Bridge and Building Convention

Thirty-five manufacturers of equipment, materials and appliances used in the construction and maintenance of railway bridges, building and water service facilities, joining under the auspices of the Bridge and Building Supply Men's Association, presented an exhibit of their products in connection with the forty-eighth annual convention of the American Railway Bridge and Building Association at the Hotel Stevens, Chicago, on October 14, 15 and 16. The number of exhibitors was greater than at any convention since the beginning of the depression, while in scope, in number of items displayed and floor space occupied, this was the largest, most colorful, and most comprehensive exhibit ever presented in connection with a convention of the Bridge and Building Association.

The officers of the Supply association who arranged and were responsible for the exhibit, which was held in the exhibition hall immediately adjacent to the convention room, were: President, C. C. Rausch, Dearborn Chemical Company, Chicago; vice-president, W. S. Carlisle, National Lead Company, Chicago; secretary, R. Y. Barham, Armco Railway Sales Company, Chicago; treasurer, F. A. McGonigle, Mall Tool Company, Chicago; and the following members of the Executive committee—honorary director, Harry A. Wolfe, The Lehon Company, Chicago; C. E. Ward, U. S. Wind Engine & Pump Company, Batavia, Ill.; A. J. Filkins, Paul Dickinson, Inc., Chicago; P. R. Austin, Johns-Manville Sales Corporation, Chicago; Mr. McGonigle; E. C. Bleam, Joseph Dixon Crucible Company, Chicago; and E. E. Thulin, Joyce-Cridland Company, Chicago.

In the election of officers for the ensuing year, Mr. Barham was advanced to president; Mr. McGonigle was elected vice-president; W. Lyle McDaniel, Massey Concrete Products Company, Chicago, was elected treasurer; and Mr. Austin was elected secretary. The new directors elected were: G. B. Coffey, A. M. Byers Company, Chicago; and E. C. Gunther, Duff-Norton Manufacturing Company, Chicago; to succeed Messrs. Ward and Filkins whose terms had expired.

A list of the exhibitors, together with the products on exhibit and the names of their representatives follows:

List of Exhibitors

Air Reduction Sales Company, New York—Electric welding unit and electrodes; oxy-acetylene welding and cutting apparatus; flame cleaning tip—C. B. Armstrong, C. Daly and E. F. Turner.

American Lumber & Treating Company, Chicago—Samples of Wolmanized timber and illustrations of its use—Robert R. Clegg, Henry Garnjobst and R. B. Putman.

Armco Railroad Sales Company, Middletown, Ohio—Samples of Armco pipe and illustrations of applications; metal building sections; crib walls; air pipe; insulated pipe units—R. Y. Barham, E. T. Cross, R. B. Faries and J. D. Taylor.

Buda Company, Harvey, Ill.—Track and bridge jacks; motor car; track and car jacks—R. M. Blackburn, H. H. Cohenour, W. Ebbert, R. B. Fisher, R. K. Mangan, D. Richards, S. W. Sanford and R. P. Williamson.

Byers Company, A. M., Pittsburgh, Pa.—Radiant heating; samples of wrought iron; samples of pipe, angles, pipe angles and bars—Richard Angel, G. B. Coffey, William Damberg, Kenneth Knapp and D. M. Stembel.

Celotex Corporation, Chicago—Samples of insulation; wallboard; cold storage insulation; interior finish; roofing; gypsum wallboard—J. H. Bracken, W. G. Rogers and H. A. Winandy.

Chicago Pneumatic Tool Co., New York—Portable air compressor; pneumatic steel and wood drills; pneumatic rock and concrete drills; pneumatic paving breakers; pneumatic clay diggers; pneumatic back-fill tampers; pneumatic sump pump; pneumatic wrenches; pneumatic grinders; electric grinders and drills—S. A. Congdon, H. F. Deubel, T. P. Harris, W. J. Pallowick, E. S. Rossell and E. S. Stevens.

Dearborn Chemical Company, Chicago—No-Ox-Id rust preventives; sealing compound for wood water tanks; aluminum protective coating; pipe coating, wrappers for protection of underground pipe; chemical pumps; proportioner — Don Bishop, E. A. Goodnow, Walter Hinsch, C. I. Loudenback, A. C. Moeller and C. C. Rausch.

Paul Dickinson, Inc., Chicago—Roof ventilators; smoke jacks; stove jacks; roof drains; exhaust heads; floor scupper; deck drains; blast plates—A. J. Filkins, E. M. Filkins and H. Knutson.

Joseph Dixon Crucible Company, Jersey City, N. J.—Industrial paints; graphite greases; pipe joint compound; samples of graphite; literature on paints and graphite products—E. C. Bleam and W. Skea.

Duff-Norton Manufacturing Company, Pittsburgh, Pa.—Bridge jacks—E. C. Gunther and J. F. Van Nort.

Independent Pneumatic Tool Company, Chicago—Electric and pneumatic portable tools—A. Anderson, J. Caswell, G. H. Du Sell. R. G. Faverty, N. C. Hurley, Jr., N. C. Kirchner, W. A. Nugent, L. Orland, A. Russell, T. Seward and F. Schiel.

Johns-Manville Sales Corporation, New York—Samples of transite pipe; corrugated transite roofing and siding; asbestos roofing and siding shingles; transite conduit; asphalt tile flooring; asphalt shingles; built-up roofing; prepared roofing; pipe insulation; asbestos wainscoting and

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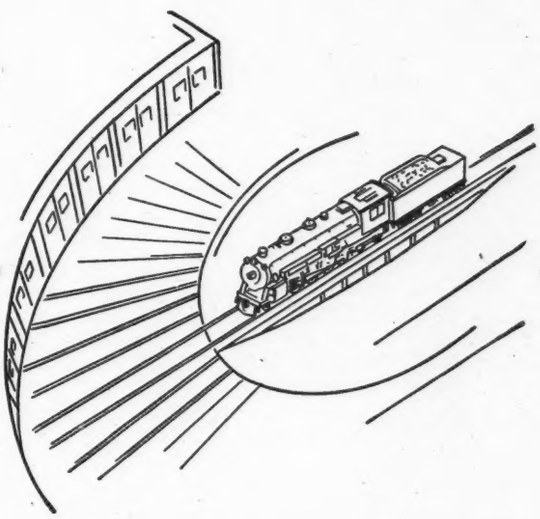
SPECIAL BRICK

SHAPES

...are a nuisance



The initial standardization of Arch Brick shapes and sizes and Arch tube spacing was the work of the American Arch Company.

It is a work that goes forward constantly and saves the Stores and Mechanical Departments a vast amount of trouble.

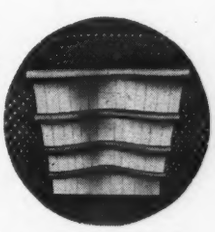
The easiest solution to many a locomotive Arch engineering difficulty would be to use a special brick shape. But this the American Arch Company is willing to do only as a last resort. Over 50 % of all Arch Brick is covered by 6 separate patterns.

The insistence of American Arch Company on adhering to standards has simplified the work of the Storekeeper and Maintenance Man. It is only one of the many ways in which American Arch Company is serving the railroads.

THERE'S MORE TO SECURITY ARCHES THAN JUST BRICK

HARBISON-WALKER REFRACTORIES CO.

Refractory Specialists



AMERICAN ARCH CO.
INCORPORATED
60 EAST 42nd STREET, NEW YORK, N. Y.
Locomotive Combustion Specialists

wall board; mechanical packing; asphalt plank—P. R. Austin, R. J. Offutt, T. O'Leary, Jr., W. G. Morehead, H. R. Poulson, W. W. Prosser, F. C. Vanderport and L. T. Youhn.

Joyce-Cridland Co., Dayton, Ohio—Bridge and track jacks; car and locomotive jacks; building jacks—Huston Brown, C. N. Thulin and E. E. Thulin.

Koppers Company, Wood Preserving Division, Pittsburgh, Pa.—Photographs of pressure-treated forest products, bridges, culverts, trestles, water tanks, coaling plants and station platforms—H. C. Busch, M. F. Cravey, John Grennan, A. R. Nickel and G. C. Rosenquist.

The Lehon Company, Chicago—Asphalt shingles; prepared and built-up roofing; cold process built-up roofing; roofing and flashing compounds; literature on roofing; waterproofing materials—John Eipper, Tom Lehon, T. L. Kennedy, E. A. Leonard, John W. Shoop and Harry Wolfe.

Mall Tool Company, Chicago—Gas and electric-driven machines for vibrating concrete and surfacing concrete, with attachments for grinding, pumping water, drilling, boring, driving lag screws, wire scratch brushing and sanding; pneumatic chain saws and cross-cut saws; electric saws; drills; grinders; and chain saws—Robert Burgwald, Stanley Gromnicki, A. W. Mall, F. A. McGonigle and N. Rehnquist.

Massey Concrete Products Corporation, Chicago—Literature on concrete pipe, piling, concrete cribbing and crossing slabs—Ross Clarke, David A. Hultgren and W. L. McDaniel.

Master Builders Company, Cleveland, Ohio—Samples of floor wearing surfaces; rust joint iron; non-shrink aggregate for concrete bonds; reground portland cement paint for concrete surfaces; liquid quick-setting compound; puzzolanic cement dispersing agent for mass concrete; membraneous curing compound; masterplate—D. H. Lee, C. A. Lyon and B. R. Wood.

National Lead Company, New York—Red lead; white lead; white lead paint; red lead paint; literature on red lead paints and the use of white lead—Ralph Baker and Hugh M. Millen.

Overhead Door Corporation, Hartford, Ind.—Overhead door—R. M. Beal, J. Hale, W. Swanson, A. C. Thomas, W. E. Walbert and H. W. Wormser.

Oxweld Railroad Service Company, Chicago—Flame cleaning apparatus; soldering and brazing outfit; complete cutting outfit; photographs of pipe welding, flame cleaning and dehydrating, pressure butt welding of rails, and flame hardening of rail ends; flood lights; samples of welded pipe and wrinkle-bent pipe—Len Adams, C. J. Gavin, E. B. Hall, Jr., Henry Hoffman, S. B. Hopkins, P. Hunter, Jr. and G. B. Moynahan.

Patterson-Sargent Company, Cleveland, Ohio—Bridge, building and car paints; and literature on bridge paint—Geo. W. Anderson, Ben Bowman and W. H. McBride.

Railway Engineering and Maintenance, Chicago—Copies of publication—G. E. Boyd, F. R. Brewster, C. M. Burpee, S. W. Hickey, N. D. Howard, Elmer T. Howson, C. W. Merriken, H. A. Morrison and J. S. Vreeland.

Railway Purchases and Stores, Chicago.

Ruberoid Company, New York and Chicago—Asbestos roofing and siding shingles; asphalt shingles and prepared roofing; models of built-up roofing—Geo. R. McVay.

Sherwin-Williams Co., Chicago—Display cans of paint; exposure panels; display panels; literature on finishes—R. D. Baker, G. A. Dorwart, H. M. Faber, W. J. Montgomery, E. M. O'Brien and C. A. Proseus.

T. W. Snow Construction Co., Chicago—Engine-house door hanger—J. E. DuPree and B. S. Snow.

The Stanley Works, Stanley Electric Tool Division, New Britain, Conn.—Portable electric power saws; portable electric power drills; portable electric power hammers; portable electric sanders; portable electric power unishears; portable electric power nut and lag screw setter—E. C. Koenig, A. J. Peterson, P. C. Platt and L. R. Warnock.

Timber Engineering Company, Washington, D. C.—Timber connectors; termite shields; and literature on connectors and timber design—J. B. Jordan and L. P. Keith.

U. S. Wind Engine & Pump Company, Batavia, Ill.—Pump jack; tank stuffing box; float valves—H. W. Beem and A. Swanson.

Wailes Dove-Hermiston Corp., Westfield, N. J.—Displays of bitumastic enamel on pipes and floor surfaces; chromastic aluminum; chromastic metal primer; bitumastic black solution; bitumastic super-service; florex floor enamel; bituglass industrial enamel; bitumastic exterior-interior paint; literature on all foregoing—photographs of coal bunkers; railway bridges; cranes; water tanks painted with bitumastic—J. J. Clancy and C. V. Lambe.

Warren Tool Corporation, Warren, Ohio—Flex-toe claw bar—W. H. Bon and Oscar Youngquist.

Wheeler Lumber Bridge & Supply Co., Des Moines, Iowa—Laminex railway crossing; lagbolt fastening; laminex literature—C. M. Mitchell.

Worthington Pump & Machinery Corp., Harrison, N. J.—Pneumatic concrete breaker; pneumatic rock drill—Paul Blakeley and Harry W. Miller.

Equipment and Supplies

LOCOMOTIVES

THE ATLANTIC COAST LINE has placed an order for two Diesel-electric switching locomotives of 1,000-hp. each with the Baldwin Locomotive Works.

THE CHICAGO SHORT LINE has placed an order for one Diesel-electric switching locomotive of 1,000-hp. with the Baldwin Locomotive Works.

THE UNITED STATES ARMY, Engineering Department, has ordered one 45-ton Diesel-electric locomotive from the Vulcan Iron Works.

THE CHICAGO & NORTHWESTERN has ordered one 44-ton Diesel-electric locomotive of 380-hp. from the Whitcomb Locomotive Company.

THE UNITED STATES ARMY, Alabama Ordnance plant, has ordered two Diesel-electric locomotives, including one of 80 tons and one of 45 tons, from the General Electric Company.

THE UNITED STATES NAVY DEPARTMENT has ordered one 30-ton Diesel-electric locomotive for delivery to Cherry Point, N. C., from the Fate-Root-Heath Company. The inquiry for this locomotive was reported in the Railway Age of September 20,—Inv. 8692.

THE UNITED STATES NAVY DEPARTMENT, Bureau of Supplies and Accounts, has ordered one fireless steam locomotive for delivery to Charleston, S. C., from the H. K. Porter Company at cost of $19,960. The inquiry for this locomotive was reported in the *Railway Age* of August 30—schedule 8427.

THE CIA. SALITREA DE TARAPACA Y ANTOFAGASTA has ordered eight 500-volt 40-ton industrial-type electric locomotives to be used in a big open pit mine in Chile from the General Electric Company. The locomotives are double-truck construction, use four HM-829 series-wound motors, are equipped for dynamic braking, and have a maximum speed of 35-mph. The locomotives will serve three shovels. Three locomotives will be used regularly with the shovels on the three shovel tracks; three will haul trains the five miles between the shovel tracks and the mill; a seventh will handle miscellaneous trains; and the eighth will be a spare. The locomotives serving the shovels are to be equipped with cable reels containing 4200 ft. of single-conductor cable.

SIGNALING

THE BESSEMER & LAKE ERIE has awarded a contract to the Union Switch & Signal Co. for the complete installation of a centralized traffic control system between Filer, Pa. and Meadville Junction, with the control panel to be located in the train dispatcher's office at Greenville, Pa. This installation will include approximately 90 main line track miles involving both single and double track using coded track circuits. The materials involved include searchlight signals, electro-pneumatic switch machines, quick detachable plug coupler relays, rectifiers, transformers, housings, etc.

Supply Trade

Lt.-Col. P. Wilson Evans, senior vice-president of the **National Aluminate Corporation,** Chicago, has been ordered to active duty by the War department, with headquarters in the U. S. District Engineer's office, San Juan, Porto Rico.

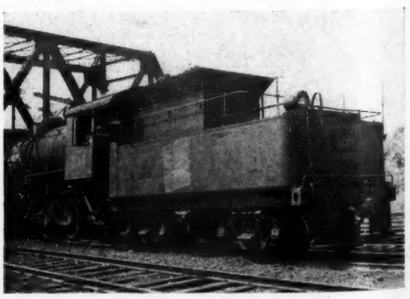
The Columbia Steel Company, subsidiary of the United States Steel Corporation, is planning a program to increase the capacity of its Pittsburg, Cal., plant. The program includes the addition of a new semi-continuous rod mill, together with billet heating furnaces, rod cooling and handling equipment. The rod mill will be housed in a new building to be built east of the plant's open hearth building. The plant's wire and nail mill will be improved and extended to include additional wire drawing and nail machines, and new facilities for the manufacture of some wire products, the production of which was formerly confined to eastern mills. The warehousing facilities of the wire mill will also be increased and some changes made to the primary rolling mills, allowing production of longer rod billets. The steel-making capacity of the Pittsburg plant is being increased to the extent of 77,000 net tons of ingots annually by the installation of a new open hearth furnace and by an increase in the capacity of the four existing open hearth furnaces. The program will require extension of the plant's open hearth buildings, the addition of new ladles, an additional ladle crane and a new charging machine.

OBITUARY

Henry Buker, sales manager for the Brown & Sharpe Manufacturing Co. of Providence, R. I., died September 29.

William F. McAfee, assistant to the president of the International Harvester Company, Chicago, died on October 17 in the Doctors' hospital, Washington, D. C. Mr. McAfee was serving in Washington as acting head of the armament production activities of the company.

* * *



A "Coal-Scuttle" Addition to the Tender Designed by the Road's Motive Power Department Affords Space for About Three More Tons of Coal On This Central Vermont Switcher at New London, Conn.

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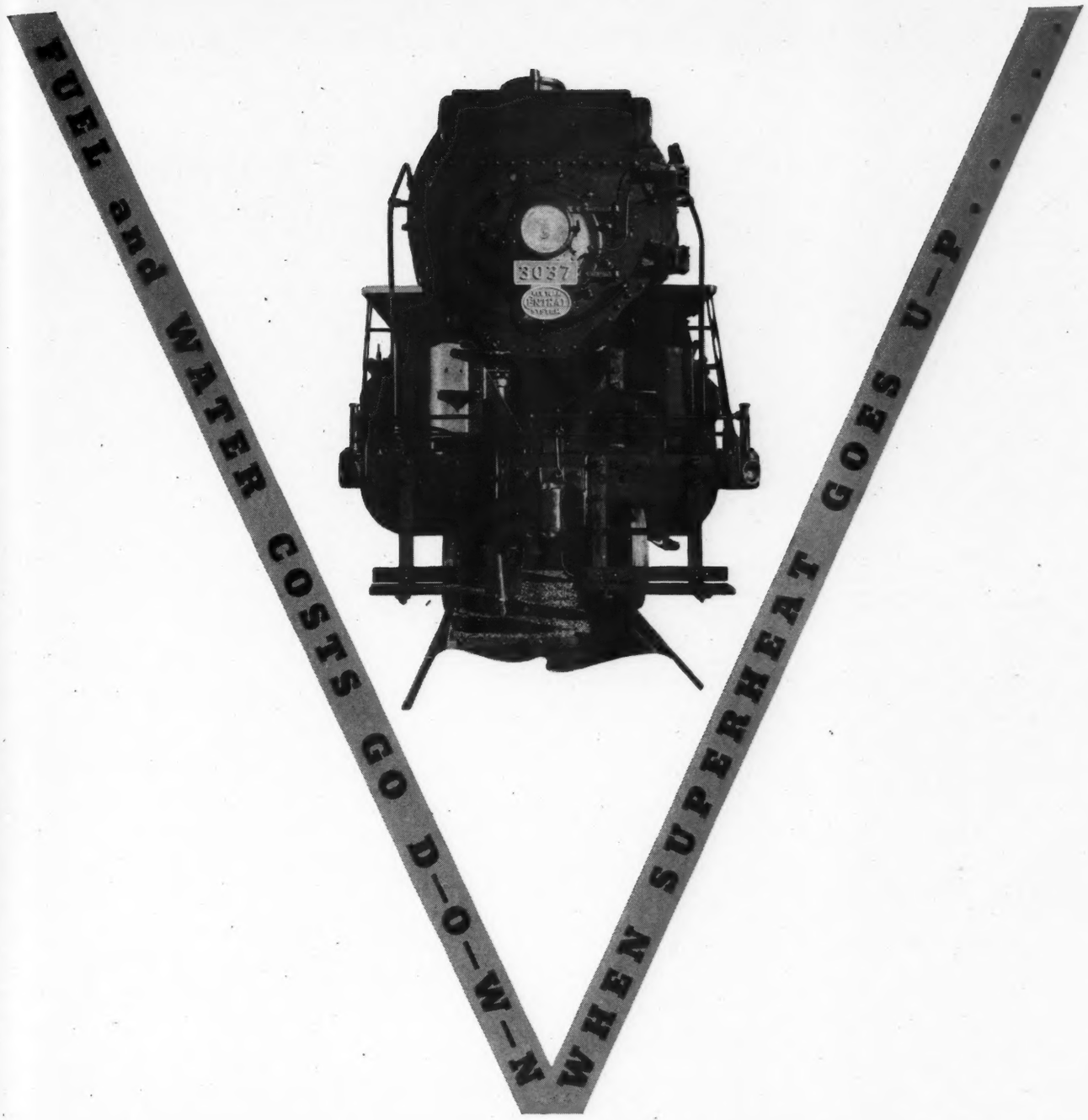


As superheat in steam increases . . . the volume of the steam increases. With 350 degrees of superheat, the weight of steam generated for an i.hp-hr. is reduced by 50%. With the same fuel and water consumption there is a corresponding increase in cylinder horsepower.

To obtain these results the Elesco small-flue-design of superheater is essential.

A-1449

ELESCO

SUPERHEATERS • FEEDWATER HEATERS
AMERICAN THROTTLES • STEAM DRYERS
EXHAUST STEAM INJECTORS • PYROMETERS

THE SUPERHEATER COMPANY

Representative of
AMERICAN THROTTLE COMPANY, INC.
60 East 42nd Street, NEW YORK
122 S. Michigan Ave. CHICAGO
• • •
Montreal, Canada
THE SUPERHEATER COMPANY, LTD.

Construction

ATCHISON, TOPEKA & SANTA FE.—A contract has been awarded the Griffith Company, Los Angeles, Cal., by the U. S. Army Engineers, for improvement of the banks of the channel of the Los Angeles river between North Broadway and the Arroyo Seco in Los Angeles, and the removal and replacement of two piers under the Santa Fe bridge over this river on which a new steel superstructure will be erected by the railway company. The major items in the contract are as follows: 134,000 cu. yd. of channel excavation; 11,000 cu. yd. of excavation for structures; 5,000 cu. yd. of rock excavation; 95,000 cu. yd. of compacted backfill; 15,000 cu. yd. of borrow; 44,000 cu. yd. of concrete; and placing 4,405,000 lb. of reinforcing steel and 27,000 sq. ft. of reinforcing mesh.

BALTIMORE & OHIO.—This company has awarded a contract to C. F. Englehart of Johnstown, Pa., for the construction of a reservoir at Westboro, Ohio at estimated cost of $33,000.

BALTIMORE & OHIO.—The Baltimore & Ohio in Pennsylvania has been authorized by Division 4 of the Interstate Commerce Commission to construct a line extending from Coleman Station, Pa., on the Somerset & Cambria branch in a southerly direction to a new coal-mining development, 8.3 miles. At the same time the B. & O. was authorized to operate the line.

BESSEMER & LAKE ERIE.—A contract has been awarded to the Union Switch & Signal Company, Swissvale, Pa., for the complete installation of a centralized traffic control system between Filer, Pa., and Meadville Junction, with the control panel to be located in the train dispatcher's office at Greenville, Pa. This installation will include approximately 90 main-line track miles, involving both single and double track, using coded track circuits. The materials involved include searchlight signals, electro-pneumatic switch machines, quick detachable plug coupler relays, rectifiers, transformers, housings, etc.

CANADIAN NATIONAL. — A contract amounting to approximately $150,000 has been awarded the F. W. McDougall Construction Company, Calgary, Alta., for the construction of a 300-ton coaling station with an attached sand pocket at Watrous, Sask. The coaling station is located adjacent to the main line for coaling through freight and passenger trains, and serves two tracks on 50-ft. centers. It will be constructed of timber treated with zinc chloride and will be supported on concrete foundations resting on piling. The sand drying equipment will be located in a separate two-story building.

A contract for a similar coaling station of 200-tons capacity with sand pocket, to be constructed at Kindersley, Sask., will be awarded soon.

CANADIAN PACIFIC. — A contract has been awarded Kenyon-Killick, Ltd., Penticton, B. C., for the construction of a frame and stucco station and office building at South Penticton, which will cost approximately $30,000.

ERIE.—The Erie is building new car repair yard facilities at Marion, Ohio, and a new coaling station for the eastbound main track at Kent, Ohio. The work is being done by company forces.

ERIE.—The Pennsylvania Public Utility Commission has approved plans calling for the abolition of a crossing at grade and the construction in lieu thereof of a crossing above grade at a point where state highway route No. 171, as it will be relocated, will cross a single track of the Erie in the village of Hoadleys, Pa. The plans provide for the construction of a 6-span, continuous deck I-beam viaduct with reinforced concrete piers and abutments. Total cost of the improvement, which it is proposed to undertake as a federal-aid grade crossing elimination project, is estimated at $117,640.

NEW YORK, CHICAGO & ST. LOUIS.—An order has been placed with the Union Switch & Signal Company, Swissvale, Pa., for materials necessary to install a centralized traffic control system covering 19 miles of single track between Vermilion, Ohio, and Kimball, with the control point at Conneaut, Ohio. The contract includes, with the control machine and C. T. C. system apparatus, Style M-22A switch machines, with necessary relays, rectifiers and transformers, housings, etc. The code control line circuits will be superimposed upon the existing dispatcher's telephone line circuit. The regular construction forces of the Nickel Plate will carry out the field installation work.

NEW YORK, NEW HAVEN & HARTFORD.—This company has authorized the reconstruction of its bridge at Noank, Conn., at estimated cost of $45,000.

PENNSYLVANIA. — This company has awarded a contract to the Roberts & Schaeffer Co., Chicago, for a reinforced concrete coaling station at Shire Oaks, Pa.

STATEN ISLAND RAPID TRANSIT.—This company has awarded a contract to M. L. Klostergard of New Dorp, Staten Island, N. Y., for the construction of a temporary detour track grading from Grant City to Bay Terrace, Staten Island, at estimated cost of $39,000.

WHEELING & LAKE ERIE.—An order has been placed with the Union Switch & Signal Company, Swissvale, Pa., for materials for an all-relay electric interlocking to be installed at a crossing with the Toledo Terminal at Ironville, Ohio. The new pant will replace an existing mechanical interlocking. In addition to the control machine, the order involves Style M-2 low-voltage switch movements, searchlight high and color-light dwarf signals, necessary relays, rectifiers, transformers, with factory-wired housings, etc. The field installation work will be carried out by the regular signal construction forces of the Wheeling & Lake Erie.

Financial

ERIE.—*Acquisition by the Tioga.*—The Tioga has asked the Interstate Commerce Commission for authority to acquire from the Blossburg Coal Company a line extending from Blossburg, Pa., to Arnot Junction, 3.5 miles.

ERIE.—*Stock Sale.*—Hemphill Noyes & Co. and Merrill, Lynch, Pierce, Fenner & Beane, on October 22, offered 150,000 shares of new common stock of this reorganized road on a "when-issued" basis, priced at $7 per share. This block of shares represents new stock to be issued in exchange for 750,000 shares of old first preferred, second preferred and common stock of the road which the two investment houses purchased from the Chesapeake & Ohio on October 21.

ERIE. — *New Directors.* — In emerging from reorganization status this road has a new board of directors comprising six former members of the board and nine new directors. New directors were Frank C. Wright, assistant to the board of directors, Reconstruction Finance Corporation; Henry S. Sturgis, vice-president, First National Bank of New York; Amory Houghton, president, Corning Glass Works; Charles T. Fisher, Jr., president, National Bank of Detroit; James S. Knowlson, president and chairman, Stewart-Warner Corporation; John A. Hadden, Cleveland lawyer and co-trustee, Erie; Daniel C. Borden, vice-president, National City Bank; Alfred C. Davis, president and executive director, Marlin-Rockwell Corporation, and Harry C. Hagerty, treasurer, Metropolitan Life Insurance Co.

ILLINOIS CENTRAL. — *Abandonment by the Yazoo & Mississippi Valley.*—The Yazoo & Mississippi Valley has asked the Interstate Commerce Commission for authority to abandon a line extending from Leland, Miss., to Yerger, 16 miles, and a line from Rosedale, Miss., to Boyle, 24.1 miles.

MISSOURI PACIFIC. — *Equipment Trust Certificates.*—This company has been authorized by Division 4 of the Interstate Commerce Commission to assume liability for $1,150,000 of two per cent equipment trust certificates, maturing in 10 equal annual installments of $115,000 on October 15 in each of the years from 1942 to 1951, inclusive. The issue has been sold at 100.912 to Harris, Hall & Co., Inc., acting on behalf of itself and Alex. Brown & Sons, the Illinois Company of Chicago, and McMaster, Hutchinson & Co., making the average annual cost to the company approximately 1.81 per cent.

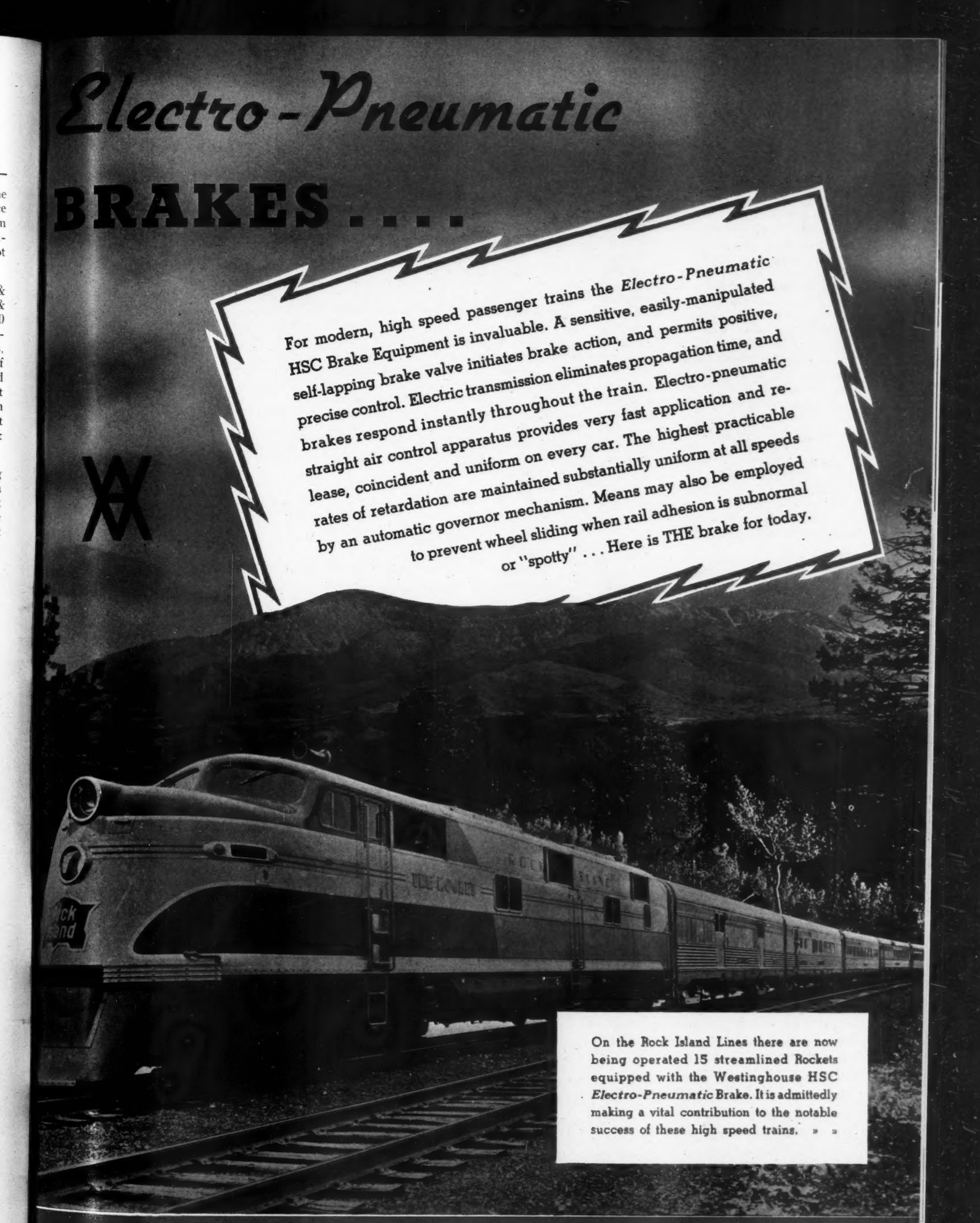
NEW YORK, SUSQUEHANNA & WESTERN-ERIE.—*Acquisition and Settlement of Claims.*—These companies have asked the Interstate Commerce Commission to approve a plan of settlement of certain claims and counterclaims involving both roads' interests in the Edgewater section of the Erie Terminals in Bergen County, N. J. Under the agreement, the N. Y. S. & W. will acquire the Edgewater section of the

Continued on next left-hand page

Electro-Pneumatic

BRAKES....

For modern, high speed passenger trains the *Electro-Pneumatic* HSC Brake Equipment is invaluable. A sensitive, easily-manipulated self-lapping brake valve initiates brake action, and permits positive, precise control. Electric transmission eliminates propagation time, and brakes respond instantly throughout the train. Electro-pneumatic straight air control apparatus provides very fast application and release, coincident and uniform on every car. The highest practicable rates of retardation are maintained substantially uniform at all speeds by an automatic governor mechanism. Means may also be employed to prevent wheel sliding when rail adhesion is subnormal or "spotty" . . . Here is THE brake for today.



On the Rock Island Lines there are now being operated 15 streamlined Rockets equipped with the Westinghouse HSC *Electro-Pneumatic* Brake. It is admittedly making a vital contribution to the notable success of these high speed trains. » »

WESTINGHOUSE AIR BRAKE CO.

WILMERDING, PENNSYLVANIA

Erie Terminals and will pay the Erie $286,503 for the property. The N. Y. S. & W. will also surrender to the Erie 80 shares of stock of the Erie Terminals.

PITTSBURGH, LISBON & WESTERN.—*Acquisition, Abandonment and Note.*—This company has asked the Interstate Commerce Commission for authority to purchase and operate a single line extending from Signal, Ohio, to Columbiana, 6.5 miles. The company will pay $404,977 for the line which is now owned and operated by the Youngstown & Suburban. At the same time, the P. L. & W. seeks authority to abandon that portion of its line between Signal, Ohio, and Lisbon, 7.4 miles. The reason given for the abandonment of one line and the substitution of another is that the line to be abandoned has an old bridge which is in such a condition that it was not thought feasible to reconstruct it.

To finance the purchase the company also asks authority to issue an unsecured negotiable note in the amount of $400,000, payable to the Youngstown Suburban. The note will bear interest at four per cent and will run for a period of five years.

SEABOARD AIR LINE.—*Reorganization of the Tampa Northern.*—A protective committee for holders of the Tampa Northern first mortgage five per cent bonds has asked the United States District Court for the Southern District of Florida to place the road in reorganization under section 77 of the Bankruptcy Act and appoint a trustee or trustees to administer its affairs. At present the road is being operated by the receivers of the Seaboard, and the bondholders committee claims that the Seaboard has made profits on the road but has failed to pay the rental to the Tampa Northern, thus causing the latter to fail to pay the interest on the bonds. The Seaboard owns 5,000 shares of common stock, 2,500 shares of preferred, and $500,000 of the Tampa Northern's improvement and extension mortgage bonds.

SOUTHERN PACIFIC.—*Abandonment.*—This company has asked the Interstate Commerce Commission for authority to abandon that part of its Coalinga branch extending from Coalinga, Calif., to Crump, 0.8 mile.

SOUTHERN PACIFIC.—*Bonds of the Central Pacific.*—The Central Pacific has been granted authority by Division 4 of the Interstate Commerce Commission to extend from November 1, 1941, to November 1, 1951, the maturity date of $8,500,000 of Nevada & California first mortgage bonds, which are owned by the Southern Pacific. The interest rate of six per cent will remain unchanged during the extended period.

SPOKANE INTERNATIONAL. — *Announces officers of reorganized road.*—E. S. McPherson, trustee, general manager and traffic manager of the Spokane International Railway Company, has announced that the Spokane International Railroad Company has taken title to the properties of the former company, which has been in trusteeship since 1933, and that the officers of the new company are: E. S. McPherson, president; J. C. Williams, vice-president and treasurer; C. W. Sawall, secretary and claims agent; L. W. Hazelwood, auditor; J. E. Hanifen, superintendent; A. C. Smith, master mechanic; O. Richter, general freight and passenger agent; James B. Williams, division engineer, and J. Bernheim, purchasing agent and storekeeper.

UNION PACIFIC.—*Equipment Trust Certificates.*—This company has been authorized by Division 4 of the Interstate Commerce Commission to assume liability for $13,250,000 of 1½ per cent equipment trust certificates, maturing in 10 equal annual installments of $1,325,000 on October 1 in each of the years from 1942 to 1951, inclusive. The issue has been sold at 99.94 to the First Boston Corporation, acting on behalf of itself and seven associates, making the average annual cost to the company approximately 1.51 per cent.

WABASH. — *Reorganization.* — The reorganization managers of the Wabash issued, on October 15, a call for deposits of securities affected by the reorganization of this road. Although the court has set November 29 as absolute deadline for such deposits, the managers call attention to the fact that they should be assured of the necessary deposits not later than November 15 in order that they may qualify a bid to be made at the foreclosure sale scheduled for December 1.

Pointing out that the institutional holders of certain bonds will leave in escrow, subject to sale, such of the new common stock as they may be entitled to receive on consummation of the plan in respect of bonds owned, the reorganization managers urged that a similar course be followed by other holders of bonds for which new stock will be given in exchange, so that the plan may not fail by reason of the inability of the Pennsylvania railroad to purchase sufficient stock to secure control of the new company.

The Wabash has been in equity receivership since December 1, 1931; the present proposed plan of reorganization was approved by the United States district court of jurisdiction on August 29, 1941, and the plan is effective as of January 1, 1941. Chief feature of the plan is purchase by the Pennsylvania of a controlling interest in the new company. The plan, as approved by the Interstate Commerce Commission, was summarized in the *Railway Age* of August 9, page 235. Reorganization managers are D. S. Beebe, J. L. Homire, R. L. Snodgrass, and T. K. Smith.

Dividends Declared

Piedmont & Northern.—50¢, quarterly, payable October 20 to holders of record October 4.

Richmond, Fredericksburg & Potomac.—7 Per Cent Guaranteed, $3.50, semi-annually; 6 Per Cent Guaranteed, $3.00, semi-annually, both payable November 1 to holders of record October 31.

Wheeling & Lake Erie.—4 Per Cent Prior Lien, $1.00, quarterly; 5½ Per Cent Conv. Preferred, $1.75, quarterly, both payable November 1 to holders of record October 27.

Average Prices of Stocks and Bonds

	Oct. 21	Last week	Last year
Average price of 20 representative railway stocks..	28.92	29.00	30.16
Average price of 20 representative railway bonds..	65.06	64.59	60.56

Railway Officers

EXECUTIVE

Herbert W. Johnson, whose election as vice-president and comptroller of the Chicago, Burlington & Quincy and the Colorado & Southern, with headquarters at Chicago, was reported in the *Railway Age*

Herbert W. Johnson

of September 27, was born in Chicago on November 24, 1879, and entered railway service on May 1, 1898, in the office of the auditor of ticket accounts of the Burlington. On January 24, 1905, he was appointed traveling auditor, and three years later was appointed clerk in charge of the over, short and damage department. On December 7, 1909, he was promoted to chief clerk in charge of claims, and in November of the following year he was advanced to assistant auditor of freight accounts. On November 1, 1913, Mr. Johnson was appointed assistant auditor of expenditures, and in January, 1917, he was promoted to auditor of expenditures. On March 1, 1920, he was appointed assistant comptroller, and on May 26, 1921, he was elected comptroller of the Burlington, later being appointed comptroller also of the Colorado & Southern and the Ft. Worth & Denver City, which positions he held until his recent appointment.

FINANCIAL, LEGAL AND ACCOUNTING

Jeremiah J. O'Neill, auditor of disbursements of the New York, New Haven & Hartford, with headquarters at New Haven, Conn., has been promoted to assistant to comptroller. **Lyman B. Pond,** auditor of revenues, with headquarters at New Haven, has been promoted to assistant to comptroller. **Leo V. Sullivan,** statistician, has been promoted to special assistant to comptroller. **Raymond C. Carmichael,** special assistant to comptroller, has been appointed auditor of disbursements. **Arthur F. Stinson,** accountant, has been promoted to general accountant. **Timothy J. Ahern,** account-

ant, has been promoted to auditor of freight receipts. **Edward L. Clough,** assistant to auditor of revenue, has been promoted to auditor of passenger receipts.

OPERATING

J. W. Phillips has been appointed a trainmaster on the Union Pacific at Salt Lake City, Utah, and **W. T. Ennis** has been appointed trainmaster at Pocatello Idaho.

George H. Minchin, assistant general manager of the Southern district of the Western lines of the Atchison, Topeka & Santa Fe, with headquarters at Amarillo, Tex., has been appointed acting general manager of the Western lines, with the same headquarters, succeeding **John A. Gillies,** who has been called to service at Washington, D. C. as a colonel in the Army Engineering Corps, as reported in the *Railway Age* of October 18.

C. Metcalf, assistant superintendent of the Hornepayne division of the Canadian National, with headquarters at Hornepayne, Ont., has been transferred to the Allandale division at Allandale, Ont., succeeding **J. M. Mills,** promoted. **E. L. Welte,** trainmaster of the Capreol division, with headquarters at Capreol, Ont., has been promoted to assistant superintendent of the Hornepayne division, succeeding Mr. Metcalf. **G. T. Dunn** has been appointed trainmaster of the Capreol division, succeeding Mr. Welte.

John J. Sell, whose promotion to terminal superintendent of the Buffalo-Rochester terminals of the Baltimore & Ohio, with headquarters at Buffalo, N. Y., was announced in the *Railway Age* of September 13, entered railroad service with the Baltimore & Ohio as a brakeman at Connellsville, Pa., on July 13, 1917. Mr. Sell became a stenographer at Cumberland, Md., on July 11, 1918, and after holding positions as labor distributor, material distributor, timekeeper, investigator and stenographer, and yardmaster, he was promoted to general yardmaster on January 1, 1927. He was promoted to assistant trainmaster at Keyser, W. Va., on June 1, 1928, and on September 1, 1928, became general yardmaster. He became terminal trainmaster at Wheeling, W. Va., on August 1, 1936, and district supervisor of terminals at Willard, Ohio, on October 19, 1939. On March 16, 1941, he was appointed trainmaster at East Salamanca, N. Y., remaining there until his present promotion.

John J. Sell

A. L. McGregor, assistant superintendent on the Canadian Pacific at Chapleau, Ont., has been transferred to the Smiths Falls division, with headquarters at Ottawa, Ont., succeeding **W. Garland,** who has been transferred to the Farnham (Que.) division.

Carl C. Pitcher, whose appointment as superintendent of the New York terminals of the Baltimore & Ohio at St. George, Staten Island, N. Y., was announced in the *Railway Age* of September 13, entered railroad service on September 7, 1911, as switch tender on the Baltimore & Ohio at Chicago. He later held positions as towerman, yard clerk, assistant yardmaster and yardmaster. On April 11, 1922, he was promoted to general yardmaster at Wheeling, W. Va., being transferred to Holloway, Ohio, in July, 1922. On March 16, 1923, Mr. Pitcher was appointed district supervisor of terminals, becoming terminal trainmaster at Philadelphia, Pa., on June 1, 1927, and trainmaster, with headquarters at Wheeling, on March 12, 1929. He was appointed assistant superintendent at Pittsburgh, Pa., on July 1, 1936, and on March 15, 1939, went to Buffalo, N. Y., as terminal superintendent, in which position he remained until his recent appointment.

Carl C. Pitcher

W. H. Jackson, assistant trainmaster of the Scioto division of the Norfolk & Western at Portsmouth, Ohio, has been promoted to trainmaster of the Radford division at Roanoke, Va., succeeding **J. O. Clendenen,** who has been appointed transportation inspector, with the same headquarters. **R. E. McGuire,** assistant trainmaster of the Pocahontas division at Iaeger, W. Va., has been transferred to the Scioto division at Portsmouth, succeeding Mr. Jackson. **P. C. Wingo,** assistant road foreman of engines of the Pocahontas division, at Williamson, W. Va., succeeds Mr. McGuire as assistant trainmaster at Iaeger. **W. A. Noell,** assistant road foreman of engines of the Pocahontas division at Bluefield, W. Va., has been transferred to Williamson, succeeding Mr. Wingo. **John P. Woods,** assistant trainmaster of the Radford division at Radford, Va., has been transferred to the Norfolk division at Crewe, Va.

Henry E. Hart, whose appointment as transportation assistant of the Baltimore & Ohio at Pittsburgh, Pa., was reported in the *Railway Age* of October 18, entered the service of the Buffalo, Rochester & Pittsburgh (now Baltimore & Ohio) as stenographer at East Salamanca, N. Y. On June 2, 1910, Mr. Hart was appointed switchman; on May 25, 1911, he became stenographer to master mechanic and on May 25, 1912, he was appointed assistant yardmaster at Rochester, N. Y. On August 1, 1916, he was appointed car accountant in the latter city. When the Buffalo, Rochester & Pittsburgh was purchased by the Baltimore & Ohio on March 1, 1932, Mr. Hart was transferred to the Car Service department of the Baltimore & Ohio as chief contract clerk, remaining in that position until his recent promotion.

Henry E. Hart

Paul L. Faustman, whose appointment as superintendent passenger transportation of the Baltimore & Ohio at Baltimore, Md., was reported in the *Railway Age* of October 18, entered the service of the Baltimore & Ohio on November 15, 1910, in

Paul L. Faustman

Continued on second left-hand page

Alco

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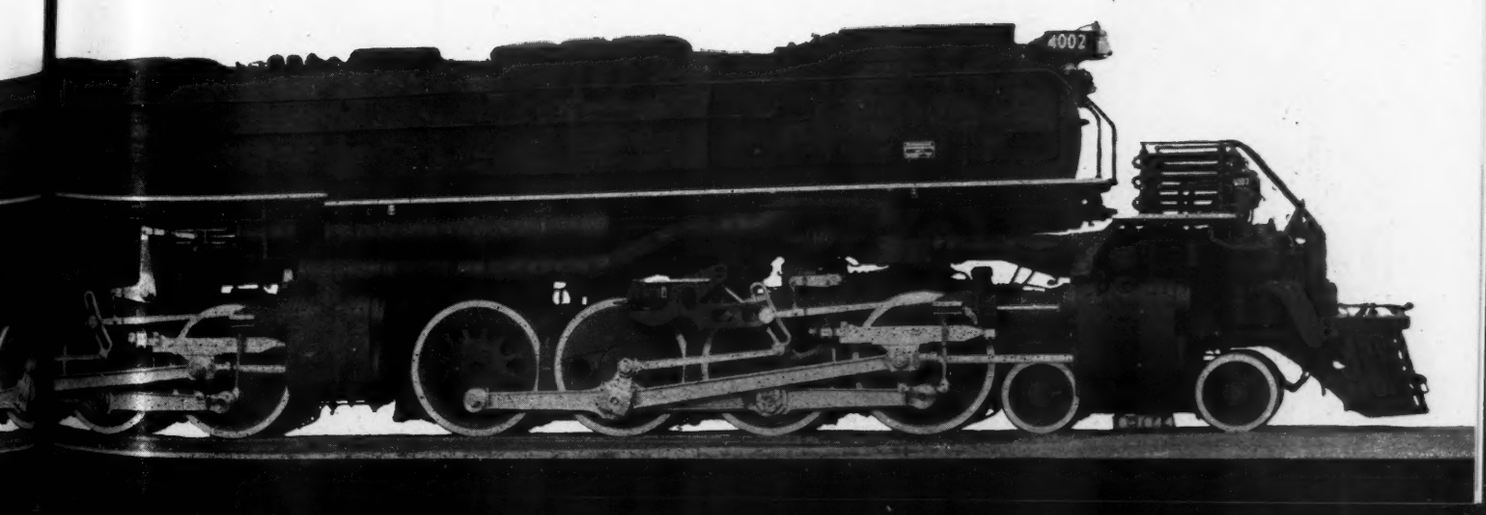

the Car Service department at Baltimore. Mr. Faustman held various clerical positions until August 14, 1917, when he became passenger clerk. On March 16, 1918, he was appointed coal clerk and on March 16, 1920, he became miscellaneous car distributor. On November 15, 1937, Mr. Faustman was appointed transportation assistant at Pittsburgh, Pa., the position he held until his recent appointment.

Fred Grundler, trainmaster on the New York Central at Elyria, Ohio, and formerly division superintendent at Elkhart, Ind., and Gibson, Ind., whose retirement on October 1 was reported in the *Railway Age* of October 18, was born at Nevada, Ill., on October 31, 1876, and entered railway service on March 1, 1893, as an agent and operator for the Minnesota & Northwestern (now the Chicago Great Western) at North Glen Ellyn, Ill. Several months later he went with the Chicago & Alton (now the Alton) as an agent and operator and in 1899 he went with Indiana, Illinois & Iowa (now part of the New York Central system as an operator, later serving in train service as a brakeman and conductor. Mr. Grundler was promoted to trainmaster in 1909 and in 1911 he became a trainmaster on the Chicago, Indiana & Southern (now also part of the New York Central system), serving on that road and the New York Central until October 9, 1920, when he was promoted to assistant superintendent at Cleveland, Ohio. On March 1, 1926, he was promoted to superintendent of the Michigan division, with headquarters at Elkhart, Ind., and four years later he was transferred to Gibson, Ind. On October 1, 1931, Mr. Grundler was appointed assistant superintendent at Erie, Pa., and on July 1, 1935, he was appointed trainmaster at Elyria, the position he held until his retirement.

ENGINEERING & SIGNALING

Karl J. Wagoner, whose appointment as district engineer of the Baltimore & Ohio at Pittsburgh, Pa., was reported in the *Railway Age* of October 4, was born on December 21, 1892, at Davis, W. Va.

Karl J. Wagoner

Mr. Wagoner attended high school at Everett, Pa.; Conway Hall Prep school, Carlisle, Pa., and was graduated from West Virginia Wesleyan, Buckhannon, W. Va., in June, 1917. He entered railroad service in June, 1917, as rodman with the Baltimore & Ohio. In October, 1917, he became levelman and in March, 1918, he was appointed transitman. He became field engineer in October, 1918, and in April, 1926, he was appointed assistant engineer at Pittsburgh, the position he held until his recent promotion.

Robert E. Kennedy, whose promotion to assistant to chief engineer of the Baltimore & Ohio at Baltimore, Md., was reported in the *Railway Age* of October 4, was born on December 3, 1885, at Carrollton, Ohio. Mr. Kennedy entered railroad service in May, 1901, as assistant with the maintenance of way department of the Baltimore & Ohio. From December 1, 1906, to December 3, 1909, he served as assistant city engineer, Alliance, Ohio, returning to the B. & O. on February 4, 1910, then serving successively as axeman, rodman, levelman, rodman, chainman, levelman, and transitman. On March 16, 1914, Mr. Kennedy was transferred to the Valuation department, where he became chief of party

Robert E. Kennedy

on March 1, 1916, and pilot engineer on April 16, 1916. In June, 1916, he was furloughed for military service, re-entering the Valuation department as pilot engineer in June, 1920. On June 1, 1927, Mr. Kennedy was appointed special engineer in the Valuation department, being transferred to the office of the auditor of capital expenditures on October 16, 1939, the position he held until his recent promotion.

William W. Gwathmey, Jr., whose promotion to district engineer of the Baltimore & Ohio at Baltimore, Md., was reported in the *Railway Age* of October 4, was born on January 18, 1889. He entered railroad service on July 24, 1911, as axeman with the Baltimore & Ohio, becoming chainman on December 14, 1911. Mr. Gwathmey was appointed rodman on February 1, 1912; chainman on July 1, 1913; rodman on October 1, 1913; transitman on December 1, 1915; assistant resident engineer on July 1, 1916; and field engineer on September 1, 1916. He was furloughed for military duty on May 30, 1917, returning to the Baltimore & Ohio on August 13, 1919, as transitman. He was appointed field engineer on March 1, 1923, becoming assistant engineer at Baltimore on April 1, 1924. He became resident engineer at Baltimore on October 1, 1935, and on July

William W. Gwathmey, Jr.

1, 1936, he again became assistant engineer there, which position he held at the time of his recent appointment.

H. M. Stout, assistant valuation engineer of the Northern Pacific, has been promoted to valuation engineer, with headquarters as before at St. Paul, Minn. Mr. Stout advances to a position which has been vacant since the death of **Adelphus C. Terrell,** valuation engineer, on May 10, 1935. The position of assistant valuation engineer has been discontinued.

Edward L. Gosnell, whose promotion to assistant chief engineer of the Baltimore & Ohio at Baltimore, Md., was reported in the *Railway Age* of October 4, was born on August 17, 1887, at Granite, Md. Mr. Gosnell received his higher education at St. Johns College, Annapolis, Md., and on September 12, 1906, he entered railway service with the Baltimore & Ohio. He was engaged continuously in construction work until 1914, when he severed his connection with the Baltimore & Ohio. In February, 1916, he re-entered the service of that road and until December, 1918, served successively as resident engineer,

Edward L. Gosnell

assistant engineer and office engineer at Cincinnati, Ohio. In December, 1918, he was appointed assistant to chief engineer

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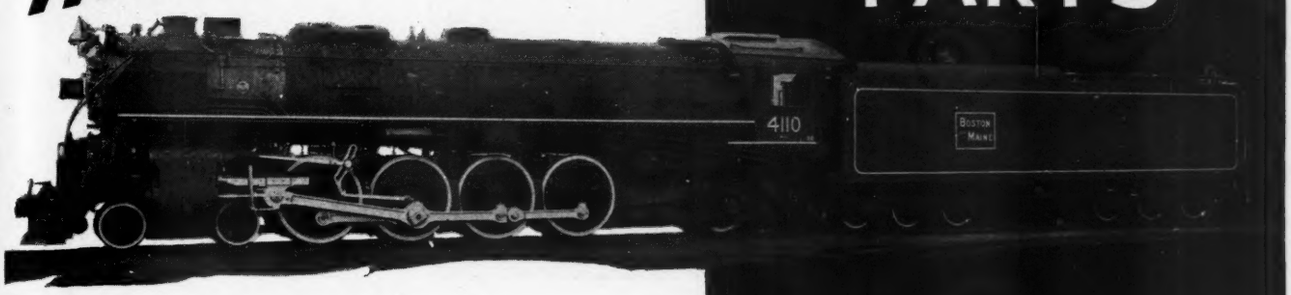

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at Baltimore, which position he held until October, 1930, when he became principal assistant engineer, the position he held until his recent promotion.

James P. Ray, whose promotion to district engineer of the Baltimore & Ohio at Cincinnati, Ohio, was reported in the *Railway Age* of October 4, was born on January 21, 1889, at Baltimore, Md. Mr. Ray attended the Polytechnic Institute at Baltimore and Lehigh University. He entered

James P. Ray

railroad service on April 1, 1910, with the Baltimore & Ohio as chainman on the Lumberport (W. Va.) cut-off, becoming levelman on May 1, 1911. From April 1 to November 1, 1915, Mr. Ray served as draftsman for the Cleveland, Cincinnati, Chicago & St. Louis, returning to the Baltimore & Ohio on the latter date in a similar capacity. On September 1, 1916, he became field engineer and on August 1, 1920, he was appointed assistant engineer, the position he held until his recent promotion. Mr. Ray was engineer in charge of the reconstruction of Bridge 19/95 over the Great Miami river in 1920-1921.

Richard Mather, whose promotion to engineer of construction of the Baltimore & Ohio at Baltimore, Md., was reported in

Richard Mather

the *Railway Age* of October 4, was born on October 3, 1877, at New Haven, Conn. Mr. Mather was graduated from Yale University in 1897 with a Ph.B. in civil engineering. He entered railroad service in 1898 as axeman with the Chicago & Western (abandoned), and from January, 1902, to October, 1903, he served as transitman, resident engineer and assistant engineer, successively, for the Chicago Great Western. From October, 1903, to August, 1905, Mr. Mather served as draftsman and assistant engineer, successively, for the Chicago, Burlington & Quincy, at Chicago, going to the Erie on the latter date in charge of location and construction of the Genesee River railroad and other construction projects. In August, 1911, Mr. Mather entered the service of the Baltimore & Ohio as assistant engineer, and later served as district engineer at Huntington, W. Va., being transferred to Baltimore in May, 1918. On June 1, 1927, he was promoted to assistant to chief engineer, the position he held until his recent promotion.

W. H. Lowther, who resigned last spring as division engineer on the Union Pacific, with headquarters at Denver, Colo., and went with the Denver & Rio Grande Western as engineering assistant at Denver, has returned to the Union Pacific as division engineer at Denver.

MECHANICAL

R. G. Allport has been appointed traveling engineer of the Canadian Pacific, Toronto, Ont., succeeding **W. J. Creighton,** transferred.

Samuel C. Gallagher has been promoted to traveling engineer of the Union railroad, to fill the vacancy caused by the promotion of **James E. Hall** to road foreman of engines, at East Pittsburgh, Pa., succeeding **John W. Wyke,** retired.

Edward J. Ball, superintendent of shops on the New York, New Haven & Hartford at Van Nest, N. Y., has been appointed superintendent of electric and Diesel locomotive maintenance, a new position, with headquarters at New Haven, Conn. **John W. O'Meara,** superintendent of the Readville (Mass.) shops, has been transferred to the Van Nest shops. **Walter R. Sederquest,** master mechanic of the Boston (Mass.) division, has been appointed superintendent of the Readville shops. **Harry W. Maxwell,** assistant master mechanic of the Boston division, has been appointed master mechanic. **James E. Fitzgerald,** general foreman of the South Boston passenger yards, has been appointed assistant master mechanic of the Boston division. **Frank C. Goble,** road foreman of engines, has been appointed general air brake inspector, with headquarters at New Haven.

TRAFFIC

Clifford C. Hahne, whose promotion to general freight agent on the Missouri Pacific, with headquarters at St. Louis, Mo., was reported in the *Railway Age* of October 18, was born at St. Louis on September 17, 1903, and entered railway service on April 13, 1922, in the accounting department of the Missouri Pacific. A year later he was transferred to the traffic department as secretary to the assistant freight traffic manager and subsequently served as secretary to the general freight agent, freight traffic manager, the assistant vice-president and the vice-president. On January 1, 1938, Mr. Hahne was appointed general agent at Shreveport, La., the position he held until his recent promotion, effective October 16.

Ralph G. Carlson, commercial agent for the Delaware, Lackawanna & Western at Chicago, has been promoted to general agent at that point, a newly created position.

J. H. McEachern, in the traffic department of the Savannah & Atlanta at Atlanta, Ga., has been promoted to general western agent, with headquarters at Chicago.

W. R. Hanna, traffic representative for the Missouri Pacific at Cleveland, Ohio, has been promoted to general agent at Chattanooga, Tenn., succeeding **G. B. Riggan** who has been appointed division freight and passenger agent at Monroe, La. Mr. Riggan relieves **W. R. Huhner** who has been appointed general agent at Shreveport, La., replacing **Clifford C. Hahne,** whose promotion to general freight agent with headquarters at St. Louis, Mo., was reported in the *Railway Age* of October 18.

OBITUARY

George W. Bumpas, for 23 years district freight agent of the Baltimore & Ohio at Wilmington, Del., died on October 17 at the Delaware hospital in that city, at the age of 57.

F. A. Feikert, division engineer of the Salt Lake division of the Southern Pacific, with headquarters at Ogden, Utah, died on September 27, when he fainted or became ill while traveling on a motor car and fell from the car as it was passing over a bridge.

J. Frank Jarrell, 75, retired newspaperman and publicist, and former publicity director and manager of agricultural development for the Atchison, Topeka & Santa Fe, died at his home at Topeka, Kan. on October 21, after an illness lasting more than a year.

Edward E. McKinley, former superintendent of the New York Terminal lines of the Baltimore & Ohio at St. George, Staten Island, N. Y., whose death on October 14 was reported in the *Railway Age* of October 18, was born on May 13, 1881, at Brooklyn, N. Y. He attended the public schools of Rochester, N. Y., Fairfield (N. Y.) Military Academy and Bannester Hall, Nyack, N. Y. Mr. McKinley entered railroad service on March 19, 1905, as a trainman with the Baltimore & Ohio, becoming conductor on April 16, 1909, and yardmaster on January 1, 1914. He was appointed trainmaster on February 1, 1916, and was promoted to superintendent on February 1, 1934. He retired because of illness early this month.

Freight Operating Statistics appear on next left-hand page

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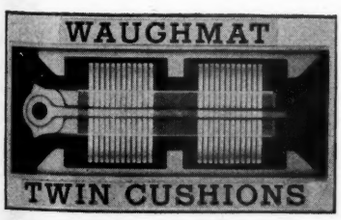

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Freight Operating Statistics of Large Steam Railways—Selected Items

Region, road, and year	Miles of road operated	Train-miles	Locomotive-miles: Principal and helper	Locomotive-miles: Light	Car-miles: Loaded (*thousands*)	Car-miles: Per cent loaded	Ton-miles (*thousands*): Gross excluding locomotives and tenders	Ton-miles (*thousands*): Net revenue and non-revenue	Number of road locomotives on line: Serviceable: Not stored	Number of road locomotives on line: Serviceable: Stored	Number of road locomotives on line: Unserviceable	Number of road locomotives on line: Per cent unserviceable
New England Region:												
Boston & Albany 1941	362	162,486	176,898	15,557	3,886	66.0	236,145	93,896	63	5	18	20.9
1940	362	136,361	140,904	9,663	2,949	65.0	174,682	64,997	57	8	20	23.5
Boston & Maine 1941	1,894	343,008	393,188	35,738	12,929	70.5	748,987	309,600	128	3	37	22.0
1940	1,892	282,451	313,771	22,869	9,397	69.4	528,182	201,869	128	..	44	25.6
N. Y., New Hav. & Hartf.† .. 1941	1,826	442,504	553,311	41,029	16,728	68.6	937,901	380,421	201	..	54	23.6
1940	1,844	337,769	423,530	27,498	11,788	66.7	648,299	245,744	191	9	50	25.3
Great Lakes Region:												
Delaware & Hudson 1941	849	323,056	382,531	44,944	12,303	65.8	814,892	394,601	126	35	72	30.9
1940	846	240,065	297,424	32,596	8,329	63.2	532,181	251,162	137	41	78	30.5
Del., Lack. & Western 1941	983	396,496	451,927	64,384	16,174	73.0	956,598	428,235	144	3	53	26.5
1940	983	343,801	384,910	50,410	12,452	68.9	725,272	290,482	138	13	51	25.2
Erie (incl. Chi. & Erie)‡ 1941	2,257	885,586	936,453	58,640	40,376	69.0	2,458,576	1,003,364	248	27	144	34.4
1940	2,268	722,250	766,447	48,959	32,047	65.2	2,017,281	779,583	237	25	161	38.1
Grand Trunk Western 1941	1,023	264,124	268,295	2,139	8,347	65.3	513,676	197,580	73	3	17	18.3
1940	1,023	218,132	221,790	1,447	6,742	63.0	417,267	151,783	70	11	18	18.2
Lehigh Valley 1941	1,251	410,763	449,835	71,059	17,238	69.7	1,094,533	506,224	132	11	40	21.9
1940	1,252	320,680	347,187	47,914	12,518	66.7	790,213	342,453	120	6	93	42.5
New York Central 1941	10,519	3,273,587	3,489,810	229,761	120,229	63.4	8,128,628	3,637,428	1,008	107	269	19.4
1940	10,563	2,717,239	2,894,473	193,470	92,838	60.9	6,410,157	2,803,383	913	137	322	23.5
N. Y., Chicago & St. Louis.. 1941	1,672	659,978	673,627	8,967	25,669	68.1	1,566,272	650,771	154	2	11	6.6
1940	1,672	519,674	529,179	6,636	19,424	63.8	1,202,962	465,059	128	14	24	14.5
Pere Marquette 1941	2,068	383,455	399,154	8,149	11,095	67.1	705,275	305,176	129	..	24	15.7
1940	2,080	346,310	354,026	8,290	9,564	63.1	607,773	248,459	112	4	41	26.1
Pittsburgh & Lake Erie 1941	232	108,952	112,976	94	4,661	63.9	399,987	234,480	45	..	15	25.0
1940	233	90,296	93,815	....	3,889	62.8	336,725	196,338	38	8	17	27.0
Wabash* 1941	2,397	643,450	656,397	13,194	22,466	70.5	1,315,360	526,270	141	21	97	37.5
1940	2,397	548,623	560,116	11,422	17,733	64.8	1,068,078	388,400	127	19	118	44.7
Central Eastern Region:												
Baltimore & Ohio 1941	6,245	2,039,445	2,562,087	273,459	69,387	64.1	4,809,972	2,277,024	843	82	216	18.9
1940	6,261	1,601,431	2,013,119	219,136	53,512	62.5	3,759,540	1,744,129	733	126	339	28.3
Central of New Jersey† 1941	675	225,160	252,335	44,416	7,338	63.2	516,730	259,495	86	9	47	33.1
1940	679	165,485	184,916	32,382	5,251	61.0	369,898	175,597	78	10	59	40.1
Chicago & Eastern Illinois.... 1941	925	184,011	184,887	3,208	5,289	69.9	321,776	143,894	58	10	23	25.3
1940	925	172,012	172,457	3,199	4,314	66.7	270,772	117,036	61	1	29	31.9
Elgin, Joliet & Eastern 1941	390	134,143	135,586	1,569	3,797	61.3	295,352	141,246	66	1	10	13.0
1940	390	112,229	113,328	1,570	2,911	58.3	230,120	112,878	60	..	18	23.1
Long Island 1941	375	30,442	31,924	19,898	335	51.3	25,537	9,509	39	3	6	12.5
1940	375	26,605	27,869	16,195	257	51.7	19,685	7,525	26	9	13	27.1
Pennsylvania System 1941	9,960	4,132,979	4,910,187	603,331	162,910	64.2	11,330,769	5,414,009	1,711	85	339	15.9
1940	9,966	3,113,328	3,749,484	435,069	119,758	61.7	8,407,567	3,863,603	1,290	154	769	34.7
Reading 1941	1,430	536,340	594,555	73,452	16,950	64.9	1,217,743	629,289	255	14	66	19.7
1940	1,442	428,361	477,969	57,652	13,050	62.3	958,349	477,590	201	17	150	40.8
Pocahontas Region:												
Chesapeake & Ohio 1941	3,053	1,062,725	1,126,479	52,255	51,716	57.4	4,389,384	2,440,261	397	22	71	14.5
1940	3,044	921,888	973,129	44,628	43,720	57.5	3,694,019	2,049,221	385	42	78	15.4
Norfolk & Western 1941	2,167	805,949	848,843	47,980	38,562	58.6	3,262,722	1,771,643	308	15	19	5.6
1940	2,169	691,042	723,247	38,088	32,926	58.1	2,753,619	1,473,947	294	31	24	6.9
Southern Region:												
Atlantic Coast Line 1941	5,050	660,440	671,826	9,801	16,138	66.0	998,975	416,062	271	30	39	11.5
1940	5,074	561,918	564,916	8,058	12,193	64.2	731,779	277,051	269	38	40	11.5
Central of Georgia† 1941	1,831	303,775	306,945	5,506	7,111	72.1	416,210	178,019	97	..	20	17.1
1940	1,831	261,838	264,007	3,833	5,557	72.2	311,539	125,588	93	..	27	22.5
Gulf, Mobile & Ohio 1941	1,962	283,865	329,484	3,090	9,513	71.0	573,804	257,101	93	2	12	11.2
1940	1,959	241,005	261,440	1,419	7,240	70.9	421,858	189,277	71	20	13	12.5
Illinois Central (incl. Y. 1941	6,521	1,577,872	1,584,406	27,953	50,132	63.1	3,347,070	1,466,501	571	33	126	17.3
& M. V.) 1940	6,557	1,230,493	1,234,095	23,138	36,833	61.3	2,417,340	1,000,462	561	76	164	20.5
Louisville & Nashville 1941	4,794	1,379,095	1,487,498	39,041	35,851	61.6	2,563,765	1,273,964	327	74	57	12.4
1940	4,862	1,169,235	1,268,407	35,262	30,069	60.0	2,162,405	1,057,531	352	38	85	17.9
Seaboard Air Line* 1941	4,298	684,281	721,358	7,203	17,266	65.2	1,097,967	473,632	255	3	46	15.1
1940	4,301	504,535	526,511	4,384	12,676	65.3	764,590	310,195	233	26	43	14.2
Southern 1941	6,521	1,788,457	1,819,776	27,533	41,369	67.2	2,487,585	1,055,804	534	1	117	17.9
1940	6,548	1,425,915	1,452,506	20,171	33,107	67.8	1,921,643	783,761	498	..	143	22.3
Northwestern Region:												
Chicago & North Western† ... 1941	8,305	1,070,858	1,107,668	24,245	35,446	64.0	2,315,577	921,596	351	14	199	35.3
1940	8,319	901,330	937,534	19,214	27,413	62.9	1,813,051	690,283	332	25	247	40.9
Chicago Great Western 1941	1,447	284,414	286,954	5,229	9,157	66.6	568,937	224,706	69	4	11	13.1
1940	1,447	247,680	249,109	6,299	7,384	63.1	462,028	169,257	66	5	17	19.3
Chi., Milw., St. P. & Pac.† .. 1941	10,846	1,573,937	1,642,351	66,017	50,184	64.0	3,327,731	1,459,720	477	20	115	18.8
1940	10,874	1,285,344	1,338,536	51,810	38,906	61.5	2,566,786	1,070,765	444	52	117	19.1
Chi., St. P., Minn. & Omaha. 1941	1,618	238,820	253,412	11,899	6,265	68.8	389,460	164,222	108	10	13	9.9
1940	1,619	238,310	252,209	11,449	5,427	66.0	344,446	141,090	109	13	11	8.3
Great Northern 1941	7,977	1,244,056	1,242,974	41,002	44,424	56.9	3,412,413	1,559,715	387	15	88	18.0
1940	7,973	1,064,619	1,063,585	34,672	36,791	57.5	2,854,135	1,341,495	383	30	111	21.2
Minneap., St. P. & S.St. M.† 1941	4,251	492,197	503,341	7,426	13,498	65.0	889,766	400,138	129	..	7	5.1
1940	4,250	462,739	470,600	5,086	11,380	61.3	751,814	335,239	129	..	4	3.0
Northern Pacific 1941	6,414	966,487	1,032,463	67,536	35,869	66.4	2,318,862	1,022,337	340	13	67	16.0
1940	6,423	800,465	850,911	51,639	28,004	65.8	1,776,413	742,278	332	42	68	15.4
Central Western Region:												
Alton 1941	915	229,835	252,054	1,108	5,722	64.4	354,574	146,301	58	5	13	17.1
1940	914	205,141	216,311	1,031	4,589	64.4	287,468	113,718	54	8	19	23.5
Atch., Top. & S. Fe (incl. 1941	13,431	2,688,488	2,966,963	165,612	81,264	62.7	5,394,745	1,961,083	737	43	95	10.9
G. C. & S. F. & P. & S. F.). 1940	13,414	1,959,718	2,100,262	110,397	56,057	61.6	3,681,681	1,233,281	605	67	164	19.6
Chicago, Burl. & Quincy 1941	8,923	1,452,089	1,515,852	55,973	45,737	60.4	3,095,238	1,284,103	442	11	89	16.4
1940	8,924	1,152,746	1,175,588	41,972	34,497	61.2	2,203,918	857,804	406	54	90	16.4
Chi., Rock I. & Pac.† 1941	7,911	1,245,491	1,274,436	9,516	33,583	63.1	2,150,361	874,014	342	16	135	27.4
1940	7,867	1,101,847	1,114,372	9,108	27,486	59.6	1,771,024	665,330	325	42	165	31.0
Denver & Rio Gr. Western† .. 1941	2,547	403,580	460,146	62,420	11,935	66.9	770,356	326,657	154	6	24	13.0
1940	2,554	339,663	385,115	46,912	9,871	61.1	651,648	247,214	142	27	18	9.6
Southern Pac.—Pac. Lines... 1941	8,490	2,066,347	2,301,710	330,265	77,417	64.1	5,064,070	1,937,380	727	8	95	11.4
1940	8,535	1,632,861	1,765,829	207,360	55,793	63.4	3,643,542	1,294,876	613	24	133	17.3
Union Pacific 1941	9,872	2,971,784	3,093,506	181,782	90,207	63.3	5,752,630	2,162,970	733	14	96	11.4
1940	9,907	2,171,949	2,253,391	137,291	69,783	61.8	4,362,457	1,494,612	596	48	202	23.9
Southwestern Region:												
Mo.-Kansas-Texas Lines 1941	3,281	461,592	466,056	7,630	12,432	65.8	755,972	295,747	86	..	94	52.2
1940	3,281	381,680	383,960	4,910	9,275	65.6	546,190	202,364	83	1	94	52.8
Missouri Pacific† 1941	7,110	1,330,016	1,365,285	27,701	41,519	66.1	2,657,676	1,138,118	429	10	61	12.2
1940	7,116	1,097,352	1,127,585	24,359	31,328	62.7	2,019,429	796,166	382	64	72	13.9
Texas & Pacific 1941	1,891	296,527	296,527	2,381	10,267	69.2	620,112	242,874	82	30	74	39.8
1940	1,882	239,869	239,869	2,336	7,774	67.4	468,916	173,453	69	22	98	51.9
St. Louis-San Francisco† 1941	4,730	802,753	824,040	15,091	19,040	63.9	1,223,906	504,934	276	13	33	10.2
1940	4,776	641,565	653,365	9,028	14,528	60.6	931,229	364,240	262	64	31	8.7
St. Louis-San Fran. & Texas.. 1941	159	29,042	29,752	52	475	61.7	32,143	11,912	10	3	1	7.1
1940	159	21,987	22,057	53	328	58.2	21,049	7,504	11	..	..	....
St. Louis Southw. Lines† 1941	1,600	330,257	334,908	4,304	10,647	76.4	599,697	260,413	85	12	25	20.5
1940	1,633	288,577	232,578	3,043	6,711	70.6	385,982	125,670	69	28	15	13.4
Texas & New Orleans 1941	4,415	766,376	766,564	12,029	20,685	68.2	1,318,603	564,272	230	12	23	8.7
1940	4,415	585,555	585,559	4,624	14,133	67.5	878,881	353,782	206	11	47	17.8

* Report of receivers.
† Report of trustee or trustees.
‡ Under trusteeship, Erie R. R. only.

for the Month of August, 1941, Compared with August, 1940

Region, road, and year	Number of freight cars on line: Home	Foreign	Total	Per cent unserviceable	Gross ton-miles per train-hour, excluding locomotives and tenders	Gross ton-miles per train-mile excluding locomotives and tenders	Net ton-miles per train-mile	Net ton-miles per loaded car-mile	Net ton-miles per car-day	Car-miles per car-day	Net ton-miles per mile of road per day	Pounds of coal per 1,000 gross ton-miles, including locomotives and tenders	Locomotive miles per locomotive-day
New England Region:													
Boston & Albany 1941	656	5,314	5,970	1.4	24,826	1,468	584	24.2	492	30.9	8,367	146	78.1
1940	873	4,374	5,247	1.8	21,959	1,302	484	22.0	397	27.7	5,792	141	61.5
Boston & Maine 1941	3,361	10,563	13,924	2.7	30,490	2,190	905	23.9	714	42.3	5,273	88	88.7
1940	4,795	6,178	10,973	4.9	26,951	1,875	717	21.5	578	38.7	3,442	92	67.2
N. Y., New Hav. & Hartf.† 1941	3,821	18,424	22,245	2.8	30,224	2,147	871	22.7	549	35.1	6,721	93	82.1
1940	6,323	11,529	17,852	5.2	28,061	1,953	740	20.8	445	32.0	4,299	100	64.6
Great Lakes Region:													
Delaware & Hudson 1941	5,532	5,228	10,760	4.9	39,510	2,541	1,231	32.1	1,123	53.2	14,993	98	61.1
1940	7,976	3,606	11,582	3.8	33,871	2,229	1,052	30.2	694	36.4	9,577	108	45.0
Del., Lack. & Western 1941	7,172	10,716	17,888	3.6	41,249	2,440	1,092	26.5	792	41.0	14,053	114	85.7
1940	10,632	6,056	16,688	6.1	37,851	2,131	853	23.3	562	35.0	9,532	117	73.4
Erie (incl. Chi. & Erie)‡ 1941	10,931	22,175	33,106	2.5	48,576	2,801	1,143	24.9	966	56.2	14,341	86	82.9
1940	13,395	15,468	28,863	2.9	48,980	2,816	1,088	24.3	879	55.4	11,088	85	68.3
Grand Trunk Western 1941	4,352	7,889	12,241	5.4	36,894	1,959	753	23.7	521	33.7	6,230	80	103.6
1940	4,440	7,290	11,730	7.5	36,268	1,925	700	22.5	429	30.2	4,786	84	80.7
Lehigh Valley 1941	6,503	13,933	20,436	1.0	49,184	2,718	1,257	29.4	792	38.7	13,053	98	98.2
1940	9,640	8,961	18,601	2.0	46,830	2,502	1,084	27.4	600	32.9	8,823	102	63.3
New York Central 1941	61,709	80,082	141,791	5.9	41,256	2,508	1,122	30.3	831	43.3	11,155	91	97.6
1940	83,567	63,550	147,117	11.6	39.068	2,380	1,041	30.2	620	33.7	8,561	91	82.5
N. Y., Chicago & St. Louis 1941	4,992	11,251	16,243	2.4	43,985	2,378	988	25.4	1,279	74.1	12,555	79	141.1
1940	6,023	8,620	14,643	2.8	42,346	2,320	897	23.9	1,009	66.0	8,972	79	112.2
Pere Marquette 1941	6,438	8,017	14,455	2.3	31,728	1,849	800	27.5	710	38.4	4,760	84	93.5
1940	8,062	7,054	15,116	3.0	29,869	1,764	721	26.0	522	31.8	3,853	88	81.6
Pittsburgh & Lake Erie 1941	6,348	9,393	15,741	8.7	48,104	3,680	2,157	50.3	461	14.3	32,603	76	67.2
1940	11,693	6,606	18,299	26.6	49,967	3,733	2,177	50.5	345	10.9	27,182	70	52.1
Wabash* 1941	8,424	11,865	20,289	1.2	40,829	2,063	826	23.4	798	48.3	7,082	99	87.6
1940	11,707	8,813	20,520	6.9	40,548	1,959	713	21.9	589	41.5	5,227	100	72.8
Central Eastern Region:													
Baltimore & Ohio 1941	44,592	41,256	85,848	2.8	32,354	2,398	1,135	32.8	881	41.9	11,762	128	84.7
1940	53,343	29,729	83,072	7.7	32,023	2,376	1,102	32.6	675	33.2	8,986	126	63.6
Central of New Jersey† 1941	4,804	16,321	21,125	3.0	29,724	2,367	1,189	35.4	404	18.1	12,401	122	86.5
1940	7,072	11,166	18,238	13.2	29,519	2,370	1,125	33.4	317	15.5	8,342	123	63.3
Chicago & Eastern Illinois 1941	2,502	3,820	6,322	4.7	31,922	1,760	787	27.2	748	39.3	5,018	106	70.5
1940	3,209	3,043	6,252	7.7	29,266	1,582	684	27.1	596	33.2	4,081	117	66.0
Elgin, Joliet & Eastern 1941	9,844	7,767	17,611	3.3	17,891	2,256	1,079	37.2	258	11.3	11,683	107	84.9
1940	9,223	7,193	16,416	3.1	18,567	2,091	1,025	38.8	228	10.1	9,336	108	68.5
Long Island 1941	64	3,925	3,989	0.8	5,906	856	319	28.4	78	5.4	818	272	49.9
1940	139	3,191	3,330	1.0	5,637	755	289	29.3	74	4.9	647	312	43.1
Pennsylvania System 1941	145,331	93,420	238,751	8.1	38,908	2,819	1,347	33.2	729	34.2	17,535	102	91.1
1940	184,608	60,802	245,410	14.9	39,210	2,764	1,270	32.3	509	25.6	12,506	100	67.3
Reading 1941	15,698	19,872	35,570	7.8	29,440	2,278	1,177	37.1	574	23.8	14,196	123	75.0
1940	23,163	11,454	34,617	17.0	29,093	2,243	1,118	36.6	445	19.5	10,684	120	54.7
Pocahontas Region:													
Chesapeake & Ohio 1941	39,404	15,599	55,003	1.2	60,528	4,173	2,320	47.2	1,425	52.6	25,784	63	85.1
1940	42,535	12,512	55,047	1.7	58,727	4,045	2,244	46.9	1,157	42.9	21,716	63	72.4
Norfolk & Western 1941	30,231	6,676	36,907	2.1	63,994	4,113	2,233	45.9	1,514	56.2	26,373	77	91.8
1940	33,477	6,283	39,760	2.1	60,462	4,038	2,162	44.8	1,159	44.5	21,921	79	76.2
Southern Region:													
Atlantic Coast Line 1941	10,635	9,228	19,863	8.7	25,948	1,518	632	25.8	699	41.1	2,658	103	70.1
1940	13,841	7,426	21,267	17.0	23,328	1,303	493	22.7	446	30.6	1,761	105	57.2
Central of Georgia† 1941	3,292	6,045	9,337	0.8	25,839	1,377	589	25.0	633	35.1	3,136	113	93.5
1940	4,115	3,354	7,469	2.3	23,253	1,198	483	22.6	542	33.2	2,213	113	78.4
Gulf, Mobile & Ohio 1941	2,757	5,391	8,148	2.2	36,620	2,029	909	27.0	1,029	53.6	4,227	102	105.3
1940	3,198	3,801	6,999	3.8	33,325	1,752	786	26.1	887	47.9	3,117	102	84.5
Illinois Central (incl. Y. 1941	24,634	23,363	47,997	1.1	34,688	2,155	944	29.3	979	53.0	7,254	111	74.7
& M. V.) 1940	28,541	16,078	44,619	3.7	32,122	1,993	825	27.2	736	44.2	4,922	111	54.4
Louisville & Nashville 1941	33,291	13,629	46,920	2.9	29,273	1,862	925	35.5	908	41.5	8,572	110	114.2
1940	33,962	9,031	42,993	11.4	30,307	1,852	906	35.2	756	35.8	7,016	108	92.7
Seaboard Air Line* 1941	9,523	9,993	19,516	2.2	28,165	1,631	704	27.4	794	44.4	3,555	115	86.1
1940	11,016	6,111	17,127	3.9	25,966	1,532	621	24.5	592	37.1	2,327	115	63.6
Southern 1941	18,702	23,555	42,257	4.8	23,766	1,404	596	25.5	814	47.5	5,223	133	95.7
1940	22,390	18,761	41,151	9.2	23,098	1,363	556	23.7	616	38.4	3,861	133	77.4
Northwestern Region:													
Chicago & North Western† 1941	28,747	27,203	55,950	6.0	32,846	2,235	890	26.0	552	33.2	3,580	107	70.1
1940	33,236	23,393	56,629	8.3	30,799	2,068	787	25.2	403	25.5	2,677	103	55.9
Chicago Great Western 1941	1,761	5,090	6,851	1.4	37,139	2,005	792	24.5	1,083	66.2	5,009	103	121.8
1940	2,183	4,339	6,522	1.2	33,871	1,869	685	22.9	875	60.4	3,773	110	99.5
Chi., Milw., St. P. & Pac.† 1941	35,377	25,845	61,222	1.3	33,990	2,128	933	29.1	753	40.4	4,341	105	99.4
1940	42,183	19,985	62,168	2.8	32,519	2,008	838	27.5	559	33.0	3,176	106	80.3
Chi., St. P., Minn. & Omaha 1941	1,770	7,806	9,576	6.8	21,770	1,671	705	26.2	555	30.8	3,274	96	70.1
1940	2,864	7,386	10,250	6.5	19,049	1,500	614	26.0	478	27.9	2,811	105	67.6
Great Northern 1941	28,086	23,674	51,760	3.0	42,043	2,755	1,259	35.1	1,080	54.1	6,307	85	89.8
1940	33,212	19,473	52,685	4.1	40,675	2,704	1,271	36.5	896	42.7	5,428	86	73.6
Minneap., St. P. & S.St. M.† 1941	9,856	6,676	16,532	2.5	30,628	1,821	819	29.6	789	41.0	3,036	85	125.8
1940	11,637	5,634	17,271	4.2	26,674	1,646	734	29.5	644	35.7	2,545	87	121.8
Northern Pacific 1941	24,400	11,920	36,320	5.2	38,896	2,411	1,063	28.5	946	50.0	5,141	114	91.8
1940	27,768	8,555	36,323	6.9	36,592	2,240	936	26.5	667	38.2	3,728	122	72.0
Central Western Region:													
Alton 1941	974	6,084	7,058	3.9	37,230	1,554	641	25.6	665	40.4	5,158	129	112.1
1940	1,558	5,459	7,017	6.6	36,485	1,409	557	24.8	509	31.9	4,013	116	90.2
Atch., Top. & S. Fe (incl. 1941	59,197	21,036	80,233	4.8	40,124	2,011	731	24.1	768	50.8	4,710	109	121.1
G. C. & S. F. & P. & S. F.) 1940	62,036	10,674	72,710	9.9	37,670	1,883	631	22.0	541	39.9	2,966	108	90.2
Chicago, Burl. & Quincy 1941	20,169	23,506	43,675	2.2	36,606	2,141	888	28.1	894	52.7	4,642	98	99.6
1940	24,919	16,641	41,560	4.5	32,564	1,921	748	24.9	651	42.8	3,101	101	76.3
Chi., Rock I. & Pac.† 1941	15,526	15,977	31,503	4.0	32,363	1,731	703	26.0	895	54.5	3,564	101	89.8
1940	17,941	12,485	30,426	4.9	30,295	1,612	606	24.2	700	48.5	2,728	104	72.2
Denver & Rio Gr. Western† 1941	9,083	6,979	16,062	3.0	32,195	1,917	813	27.4	675	36.8	4,137	147	97.2
1940	10,740	4,902	15,642	3.5	30,754	1,926	731	25.0	502	32.8	3,122	145	80.2
Southern Pac.—Pac. Lines 1941	27,764	40,477	68,241	2.6	35,220	2,472	946	25.0	940	58.6	7,361	98	107.4
1940	28,087	30,234	58,321	4.5	36,357	2,251	800	23.2	722	49.1	4,894	94	88.1
Union Pacific 1941	33,755	34,380	68,135	5.5	42,471	1,955	735	24.0	1,071	70.5	7,068	115	130.1
1940	35,053	23,251	58,304	6.1	44,590	2,029	695	21.4	849	64.2	4,867	111	95.5
Southwestern Region:													
Mo.-Kansas-Texas Lines 1941	4,848	5,150	9,998	13.8	32,268	1,643	643	23.8	903	57.7	2,908	76	91.3
1940	5,220	3,359	8,579	7.2	29,115	1,433	531	21.8	764	53.4	1,990	81	75.0
Missouri Pacific† 1941	13,686	24,196	37,882	1.2	36,116	2,011	861	27.4	939	51.8	5,164	105	96.9
1940	16,763	16,687	33,450	2.3	33,607	1,849	729	25.4	755	47.4	3,609	107	77.4
Texas & Pacific 1941	2,163	5,047	7,210	2.0	43,596	2,092	819	23.7	1,080	65.9	4,143	79	55.6
1940	2,597	3,824	6,421	3.0	39,712	1,959	725	22.3	884	58.8	2,973	81	44.1
St. Louis-San Francisco† 1941	11,985	7,390	19,375	3.2	31,373	1,532	632	26.5	801	47.3	3,444	111	89.0
1940	15,305	5,489	20,794	2.1	29,052	1,455	569	25.1	553	36.4	2,460	111	63.8
St. Louis-San Fran. & Texas 1941	....	322	322	3.1	23,652	1,107	410	25.1	958	61.9	2,417	116	69.8
1940	....	346	346	2.9	19,083	959	342	22.9	625	47.0	1,522	127	65.7
St. Louis Southw. Lines† 1941	1,669	3,526	5,195	1.4	37,156	1,818	790	24.5	1,660	88.8	5,250	76	95.5
1940	2,310	2,643	4,953	2.3	33,494	1,691	551	18.7	810	61.3	2,482	84	72.7
Texas & New Orleans 1941	4,649	13,102	17,751	3.1	33,831	1,736	743	27.3	1,073	57.7	4,123	79	100.2
1940	5,590	10,765	16,355	3.7	28,691	1,519	612	25.0	746	44.1	2,585	84	77.4

Compiled by the Bureau of Statistics, Interstate Commerce Commission. Subject to revision.

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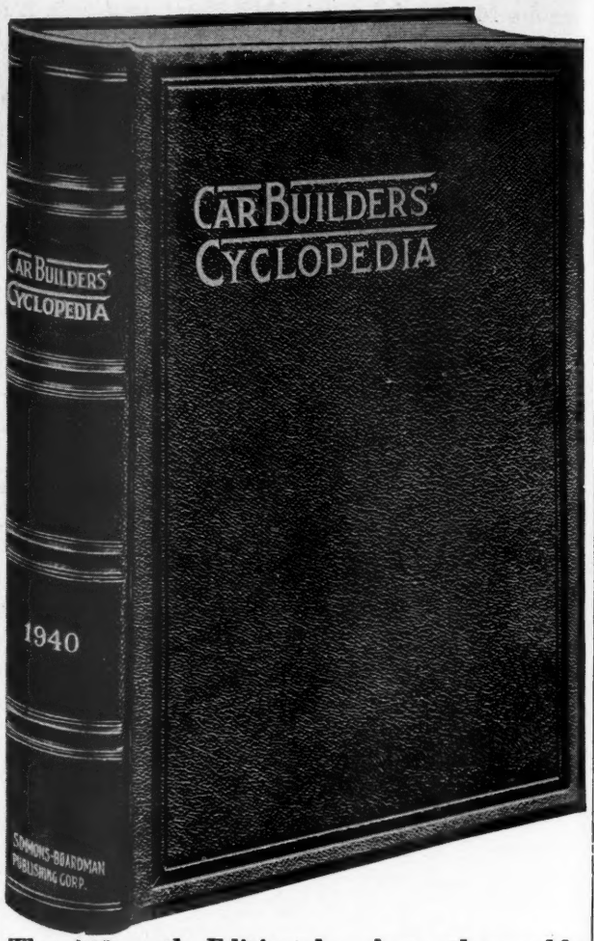

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